Satellite® M20 Series User's Guide

If you need assistance:

- InTouch® Center

  Calling within the United States (800) 457-7777

  Calling from outside the United States (949) 859-4273

For more information, see Chapter 9 on page 185 of this guide.

TOSHIBA C6649-0303M1

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Models: Satellite M20 Series

ReWritable CD/DVD Drives

The computer system you purchased may include a ReWritable CD and/or DVD drive(s), among the most advanced data storage technologies available. As with any new technology, you must read and follow all set-up and usage instructions in the applicable user guides and/or manuals enclosed. If you fail to do so, this product may not function properly and you may lose data or suffer other damage. **TOSHIBA AMERICA** INFORMATION SYSTEMS ("TOSHIBA"), ITS AFFILIATES AND SUPPLIERS DO NOT WARRANT THAT OPERATION OF THE PRODUCT WILL BE UNINTERRUPTED OR ERROR FREE. YOU AGREE THAT TOSHIBA, ITS AFFILIATES AND SUPPLIERS SHALL HAVE NO RESPONSIBILITY FOR DAMAGE TO OR LOSS OF ANY BUSINESS, PROFITS, PROGRAMS, DATA OR REMOVABLE STORAGE MEDIA ARISING OUT OF OR RESULTING FROM THE USE OF THE PRODUCT, EVEN IF ADVISED OF THE POSSIBILITY THEREOF.

Protection of Stored Data

For your important data, please make periodic back-up copies of all the data stored on the hard disk or other storage devices as a precaution against possible failures, alteration, or loss of the data. IF YOUR DATA IS ALTERED OR LOST DUE TO ANY TROUBLE, FAILURE OR MALFUNCTION OF THE HARD DISK DRIVE OR OTHER STORAGE DEVICES AND THE DATA CANNOT BE RECOVERED, TOSHIBA SHALL NOT BE LIABLE FOR ANY DAMAGE OR LOSS OF DATA, OR ANY OTHER DAMAGE RESULTING THEREFROM. WHEN COPYING OR TRANSFERRING YOUR DATA, PLEASE BE SURE TO CONFIRM WHETHER THE DATA HAS BEEN SUCCESSFULLY COPIED OR TRANSFERRED. TOSHIBA DISCLAIMS ANY LIABILITY FOR THE FAILURE TO COPY OR TRANSFER THE DATA CORRECTLY.

Critical Applications

The computer you have purchased is not designed for any "critical applications." "Critical applications" means life support systems, medical applications, connections to implanted medical devices, commercial transportation, nuclear facilities or systems or any other applications where product failure could lead to injury to persons or loss of life or catastrophic property damage. ACCORDINGLY, TOSHIBA, ITS AFFILIATES AND SUPPLIERS DISCLAIM ANY AND ALL LIABILITY ARISING OUT OF THE USE OF THE COMPUTER PRODUCTS IN ANY CRITICAL APPLICATIONS. IF YOU USE THE COMPUTER PRODUCTS IN A CRITICAL APPLICATION, YOU, AND NOT TOSHIBA, ASSUME FULL RESPONSIBILITY FOR SUCH USE.

FCC Notice "Declaration of Conformity Information"

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NOTE *Only peripherals complying with the FCC Class B limits may be attached to this computer. Operation with non-compliant peripherals or peripherals not recommended by Toshiba is likely to result in interference to radio and TV reception. Shielded cables must be used between the external devices and the computer's serial port, parallel port, monitor port, USB port, PS/2® port and microphone jack. Changes or modifications made to this equipment not expressly approved by Toshiba or parties authorized by Toshiba could void the user's authority to operate the equipment.*

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

Contact:

Toshiba America Information Systems, Inc.

9740 Irvine Blvd.

Irvine, CA 92618-1697

(949) 583-3000

Industry Canada requirement

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conformé à la norme NMB-003 du Canada.

FCC requirements

The following information is pursuant to FCC CFR 47, Part 68 and refers to internal modems.

Installation

When you are ready to install or use the modem, call your local telephone company and give them the following information:

- The telephone number of the line to which you will connect the modem.
- The FCC registration number of the modem.
- The Ringer Equivalence Number (REN) of the modem, which is 0.6B.

The modem connects to the telephone line by means of a standard jack called the USOC RJ11C.

Type of service

Your modem is designed to be used on standard-device telephone lines. Connection to telephone company-provided coin service (central office implemented systems) is prohibited. Connection to party lines service is subject to State tariffs. If you have any questions about your telephone line, such as how many pieces of equipment you can connect to it, the telephone company will provide this information upon request.

Telephone company procedures

The goal of the telephone company is to provide you with the best service it can. In order to do this, it may occasionally be necessary for them to make changes in their equipment, operations or procedures. If these changes might affect your service or the operation of your equipment, the telephone company will give you notice, in writing, to allow you to make any changes necessary to maintain uninterrupted service.

If problems arise

If any of your telephone equipment is not operating properly, you should immediately remove it from your telephone line, as it may cause harm to the telephone network. If the telephone company notes a problem, they may temporarily discontinue service. When practical, they will notify you in advance of this disconnection. If advance notice is not feasible, you will be notified as soon as possible. When you are notified, you will be given the opportunity to correct the problem and informed of your right to file a complaint with the FCC. In the event repairs are ever needed on your modem, they should be performed by Toshiba Corporation or an authorized representative of Toshiba Corporation.

Disconnection

If you should ever decide to permanently disconnect your modem from its present line, please call the telephone company and let them know of this change.

Fax branding

The Telephone Consumer Protection Act of 1991 makes it unlawful to use a computer or other electronic device to send any message via a telephone fax machine unless such message clearly contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business, other entity or individual sending the message and the telephone number of the sending machine or such business, other entity or individual.

In order to program this information into your fax modem, you should complete the setup for your fax software before sending a message.

Instructions for IC CS-03 certified equipment

1 NOTICE: The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

2 The user manual of analog equipment must contain the equipment's Ringer Equivalence Number (REN) and an explanation notice similar to the following:

The Ringer Equivalence Number (REN) of this device can be found on the label affixed to your computer.

NOTICE: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.

3 The standard connecting arrangement (telephone jack type) for this equipment is jack type(s): USOC RJ11C.

Wireless Interoperability

The TOSHIBA Wireless LAN Mini PCI Card products are designed to be interoperable with any wireless LAN product that is based on Direct Sequence Spread Spectrum (DSSS) radio technology, and is compliant to:

- The IEEE 802.11 Standard on Wireless LANs (Revision A/B), as defined and approved by the Institute of Electrical and Electronics Engineers.
- The Wireless Fidelity(WiFi) certification as defined by the WECA Wireless Ethernet Compatibility Alliance.

Caution

This device is restricted to indoor use due to its operation in the 5.15 to 5.85 GHz frequency range.

Wireless LAN and your Health

Wireless LAN products, like other radio devices, emit radio frequency electromagnetic energy. The level of energy emitted by Wireless LAN devices however is far much less than the electromagnetic energy emitted by wireless devices like for example mobile phones.

Because Wireless LAN products operate within the guidelines found in radio frequency safety standards and recommendations, TOSHIBA believes Wireless LAN is safe for use by consumers. These standards and recommendations reflect the consensus of the scientific community and result from deliberations of panels and committees of scientists who continually review and interpret the extensive research literature.

In some situations or environments, the use of Wireless LAN may be restricted by the proprietor of the building or responsible representatives of the organization. These situations may for example include:

- Using the Wireless LAN equipment on board of airplanes, or
- In any other environment where the risk of interference to other devices or services is perceived or identified as harmful.

If you are uncertain of the policy that applies on the use of wireless devices in a specific organization or environment (e.g. airports), you are encouraged to ask for authorization to use the Wireless LAN device prior to turning on the equipment.

Regulatory Information

The TOSHIBA Wireless LAN Mini PCI Card must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product. This device complies with the following radio frequency and safety standards.

Canada – Industry Canada (IC)

This device complies with RSS 210 of Industry Canada.

The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Health Canada's website www.hc-sc.gc.ca/rpb. The RF device shall not be co-located with any other transmitter that has not been tested with this device.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of this device.

L 'utilisation de ce dispositif est autorisée seulement aux conditions suivantes: (1) il ne doit pas produire de brouillage et (2) l' utilisateur du dispositif doit étre prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

The term "IC" before the equipment certification number only signifies that the Industry Canada technical specifications were met.

To prevent radio interference to the licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.

Pour empecher que cet appareil cause du brouillage au service faisant l'objet d'une licence, il doit etre utilize a l'interieur et devrait etre place loin des fenetres afin de Fournier un ecram de blindage maximal. Si le matriel (ou son antenne d'emission) est installe a l'exterieur, il doit faire l'objet d'une licence.

Europe – EU Declaration of Conformity

- This device complies with the essential requirements of the R&TTE Directive 1999/5/EC with essential test suites as per standards:

EN 60950 Safety of Information Technology equipment

ETS 300 328 Technical requirements for radio equipment

ETS 300 826 General EMC requirements for radio equipment.

België/ Belgique:	For outdoor usage only channel 10 (2457 MHz) and 11 (2462 MHz) is allowed. For private usage outside buildings across public grounds over less than 300m no special registration with IBPT/BIPT is required. Registration to IBPT/BIPT is required for private usage outside buildings across public grounds over more than 300m. An IBPT/BIPT license is required for public usage outside building. For registration and license please contact IBPT/BIPT.
	Gebruik buiten gebouw alleen op kanalen 10 (2457 MHz) en 11 (2462 MHz). Voor privé-gebruik buiten gebouw over publieke groud over afstand kleiner dan 300m geen registratie bij BIPT/IBPT nodig; voor gebruik over afstand groter dan 300m is wel registratie bij BIPT/IBPT nodig. Voor publiek gebruik buiten gebouwen is licentie van BIPT/ IBPT verplicht. Voor registratie of licentie kunt u contact opnemen met BIPT.

	L'utilisation en extérieur est autorisé sur le canal 10 (2457 MHz) et 11 (2462 MHz). Dans le cas d'une utilisation privée, a l'extérieur d'un bâtiment, audessus d'un espace public, aucun enregistrement n'est nécessaire pour une distance de moins de 300m. Pour une distance supérieure à 300m un enregistrement auprés de l'IBPT est requise. Pour une utilisation publique à l'extérieur de bâtiments, une licence de l'IBPT est requise. Pour les enregistrements et licences, veuillez contacter l'IBPT.
Deutschland:	License required for outdoor installations. Check with reseller for procedure to follow.
	Anmeldung im Outdoor-Bereich notwendig, aber nicht genehmigungspflichtig. Bitte mit Händler die Vorgehensweise abstimmen.
France:	Restricted frequency band: only channels 10 and 11 (2457 MHz and 2462 MHz respectively) may be used in France. License required for every installation, indoor and outdoor installations. Please contact ART for procedure to follow.
	Bande de fréquence restreinte : seuls les canaux 10 à 11 (2457 et 2462 MHz respectivement) doivent être utilisés en France. Toute utilisation, qu'elle soit intérieure ou extérieure, est soumise à autorisation. Vous pouvez contacter l'Autorité de Régulation des Télécommuniations (http://www.art-telecom.fr) pour la procédure à suivre.
Italia:	License required for indoor use. Use with outdoor installations not allowed.
	E'necessaria la concessione ministeriale anche per l'uso interno. Verificare con i rivenditori la procedura da seguire. L'uso per installazione in esterni non e' permessa.
Nederland:	License required for outdoor installations. Check with reseller for procedure to follow.
	Licentie verplicht voor gebruik met buitenantennes. Neem contact op met verkoper voor juiste procedure.

USA-Federal Communications Commission (FCC)

This device complies with Part 15 of FCC Rules. Operation of the devices in a Wireless LAN System is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference that may cause undesired operation.

TOSHIBA is not responsible for any radio or television interference caused by unauthorized modification of the devices included with this TOSHIBA Wireless LAN Mini PCI Card, or the substitution or attachment of connecting cables and equipment other than specified by TOSHIBA.

The correction of interference caused by such unauthorized modification, substitution or attachment will be the responsibility of the user.

Caution: Exposure to Radio Frequency Radiation

The Toshiba Wireless LAN Mini PCI Card will be installed with one of two types of antennas. The both of antenna types, when installed are located at the upper edge of the LCD screen.

For both antennas, the radiated output power of the TOSHIBA Wireless LAN Mini PCI Card is far below the FCC radio frequency exposure limits. Nevertheless, the TOSHIBA Wireless LAN Mini PCI Card shall be used in such a manner that the potential for human contact during normal operation is minimized. In normal operating configuration, the LCD in the upright position, the distance between the antenna and the user should not be less than 20cm. The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. Antenna(s) used in 5.15-5.25GHz frequency band must be integral antenna which provide no access to the end user.

Refer to the Regulatory Statements as identified in the documentation that comes with those products for additional information.

Caution: Radio Frequency Interference Requirements

This device is restricted to indoor use due to its operation in the 5.15 to 5.25 GHz frequency range. FCC requires this product to be used indoors for frequency range 5.15 to 5.25 GHz to reduce the potential for harmful interference to co-channel Mobile Satellite systems.

High power radars are allocated as primary users of the 5.25 to 5.35 GHz and 5.65 to 5.85 GHz bands. These radar stations can cause interference with and/or damage this device.

Taiwan

Article 14	Unless approved, for any model accredited low power radio frequency electric machinery, any company, trader or user shall not change the frequency, increase the power or change the features and functions of the original design.
Article 17	Any use of low power radio frequency electric machinery shall not affect the aviation safety and interfere with legal communications. In event that any interference is found, the use of such electric machinery shall be stopped immediately, and reusing of such products can be resumed until no interference occurs after improvement.

The legal communications mentioned in the above item refer to radio communications operated in accordance with telecommunication laws and regulations.

Low power radio frequency electric machinery shall resist against interference from legal communications or from industrial, scientific and medical radio emission electric machinery.

Using this equipment in Japan

In Japan, the frequency bandwidth of 2,400-2,483.5 MHz for second generation low-power data communication systems such as this equipment overlaps that of mobile object identification systems (premises radio station and specified low-power radio station).

1. Sticker

   Please put the following sticker on devices incorporating this product.

In the frequency bandwidth of this equipment, industrial device, scientific device, medical device like microwave oven, licensed premises radio station and non-licensed specified low-power radio station for mobile object identification system (RF-ID) that is used in product line of factories,(Other Radio Stations) are used.

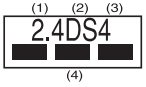
1 Please make sure before using this equipment that no Other Radio Stations are used in the neighborhood.

2 In case that RF interference occurs to Other Radio Stations from this equipment, please change promptly the frequency for use, place to use, or stop emitting Radio.

3 Please contact TOSHIBA Direct PC if you have a problem, such as interference from this equipment to Other Radio Stations

2. Indication

The indication shown below appears on this equipment.



1 2.4 this equipment uses a frequency of 2.4 GHz.

2 DS.This equipment uses DS-SS modulation.

3 The interference range of this equipment is less than 40m.

4 This equipment uses a frequency bandwidth from 2,400 MHz to 2,483.5 MHz.

It is possible to avoid the band of mobile object identification systems.

3. TOSHIBA Direct PC

Monday – Friday: 10:00 – 17:00

Toll Free Tel: 0120-13-1100

Direct Dial: 03-3457-5916

Fax: 03-5444-9450

Device Authorization

This device obtains the Technical Regulation Conformity Certification and the Technical Conditions Compliance Approval, and it belongs to the device class of radio equipment of low-power data communication system radio station stipulated in the Radio Law and the Telecommunications Business Law of Japan.

The Name of the radio equipment: MPC13A-20/R

JAPAN APPROVALS INSTITUTE FOR TELECOMMUNICATIONS EQUIPMENT

Approval Number: D01-1128JP

TELECOM ENGINEERING CENTER Approval Number: 03NY.A0018, 03GZDA0017

The following restrictions apply:

- Do not disassemble or modify the device.
- Do not install the embedded wireless module into other device.

Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Toshiba is not responsible for any radio or television interference caused by unauthorized modification of the devices included with this Toshiba Wireless LAN Mini PCI Card, or the substitution or attachment of connecting cables and equipment other than specified by Toshiba.

The correction of interference caused by such unauthorized modification, substitution or attachment will be the responsibility of the user.

Approved Countries/Regions for use for the Atheros AR5001X Mini PCI Wireless network adapter

This equipment is approved to the radio standard by the countries/regions in the following table.

CAUTION *Do not use this equipment except in the countries/regions in the following table.*

NOTE *This device works on passive scan only.*

A peer-to-peer mode is not available in 802.11a and Turbo Mode.

802.11b (2.4GHz)

Australia	Austria	Belgium
Canada	Denmark	Finland
France	Germany	Greece
Ireland	Italy	Liechtenstein
Luxembourg	Netherlands	New Zealand
Norway	Portugal	Sweden
Switzerland	UK	USA

802.11a (5GHz)

Australia	Austria	Belgium
Canada	Denmark	Finland
France	Germany	Greece
Ireland	Italy	Liechtenstein
Luxembourg	Netherlands	New Zealand
Norway	Portugal	Sweden
Switzerland	UK	USA

Turbo Mode (5GHz)

Canada	USA	

Approved Countries/Regions for use for the Intel® PRO/ Wireless LAN 2100 3B Mini PCI Adapter

This equipment is approved to the radio standard by the countries/regions in the following table.

⚠CAUTION *Do not use this equipment except in the countries/regions in the following table.*

Argentina	Australia	Austria
Belgium	Brazil	Canada
Chilli	Denmark	Finland
France	Germany	Greece
Iceland	Ireland	Italy
Japan	Liechtenstein	Luxembourg
Mexico	Netherlands	New Zealand
Norway	Peru	Portugal
Singapore	Spain	Sweden
Switzerland	UK	Uruguay
USA	Venezuela	

Approved Countries/Regions for use for the Toshiba Mini PCI Wireless LAN Card

This equipment is approved to the radio standard by the countries/regions in the following table.

⚠CAUTION *Do not use this equipment except in the countries/regions in the following table.*

Australia	Austria	Belgium
Canada	Denmark	Finland
France	Germany	Greece
Hong Kong	Iceland	Ireland

Italy	Japan	Liechtenstein
Luxembourg	Malaysia	Netherlands
New Zealand	Norway	Philippines
Portugal	Singapore	Spain
Sweden	Switzerland	Thailand
UK	USA	

Regulatory statements

This product complies with any mandatory product specification in any country/region where the product is sold. In addition, the product complies with the following:

European Union (EU) and EFTA

This equipment complies with the R&TTE directive 1999/5/EC and has been provided with the CE mark accordingly.

Canada-Industry Canada(IC)

This device complies with RSS 210 of Industry Canada.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of this device."

L ' utilisation de ce dispositif est autorisée seulement aux conditions suivantes : (1) il ne doit pas produire de brouillage et (2) l' utilisateur du dispositif doit étre prét à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

The term "IC" before the equipment certification number only signifies that the Industry Canada technical specifications were met.

Caution: FCC Interference Statement

This device complies with part15 of the FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and

- This device must accept any interference received, including interference that may cause undesired operation.

Note that any changes or modifications to this equipment not expressly approved by the manufacturer may void the authorization to operate this equipment.

NOTE *Changes or modifications made to this equipment not expressly approved by TOSHIBA or parties authorized by TOSHIBA could void the user's authority to operate the equipment.*

Taiwan

Article 14	Unless approved, for any model accredited low power radio frequency electric machinery, any company, trader or user shall not change the frequency, increase the power or change the features and functions of the original design.
Article 17	Any use of low power radio frequency electric machinery shall not affect the aviation safety and interfere with legal communications. In event that any interference is found, the use of such electric machinery shall be stopped immediately, and reusing of such products can be resumed until no interference occurs after improvement.

The legal communications mentioned in the above item refer to radio communications operated in accordance with telecommunication laws and regulations.

Low power radio frequency electric machinery shall resist against interference from legal communications or from industrial, scientific and medical radio emission electric machinery.

Using this equipment in Japan

In Japan, the frequency bandwidth of 2,400-2,483.5 MHz for second generation low-power data communication systems such as this equipment overlaps that of mobile object identification systems (premises radio station and specified low-power radio station).

1. Sticker

Please put the following sticker on devices incorporating this product.

In the frequency bandwidth of this equipment, industrial device, scientific device, medical device like microwave oven, licensed premises radio station and non-licensed specified low-power radio station for mobile object identification system (RF-ID) that is used in product line of factories,(Other Radio Stations) are used.

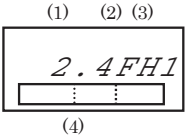
1 Please make sure before using this equipment that no Other Radio Stations are used in the neighborhood.

2 In case that RF interference occurs to Other Radio Stations from this equipment, please change promptly the frequency for use, place to use, or stop emitting Radio.

3 Please contact TOSHIBA Direct PC if you have a problem, such as interference from this equipment to Other Radio Stations

2. Indication

The indication shown below appears on this equipment.



1 2.4: this equipment uses a frequency of 2.4 GHz.

2 FH: This equipment uses FH-SS modulation.

3 The interference range of this equipment is less than 10m.

4 This equipment uses a frequency bandwidth from 2,400 MHz to 2,483.5 MHz. It is impossible to avoid the band of mobile object identification systems.

3. TOSHIBA Direct PC

Monday – Friday: 10:00 – 17:00

Toll Free Tel: 0120-13-1100

Direct Dial: 03-3457-5916

Fax: 03-5444-9450

Device Authorization

This device obtains the Technical Regulation Conformity Certification, and it belongs to the device class of radio equipment of low-power data communication system radio station stipulated in the Radio Law of Japan.

The Name of the radio equipment: EYXF2CS

TELECOM ENGINEERING CENTER

Approval Number: 01NYDA1305

The following restrictions apply:

- Do not disassemble or modify the device.
- Do not install the embedded wireless module into other device.

CD-ROM, DVD-ROM, and Multifunction drive safety instructions

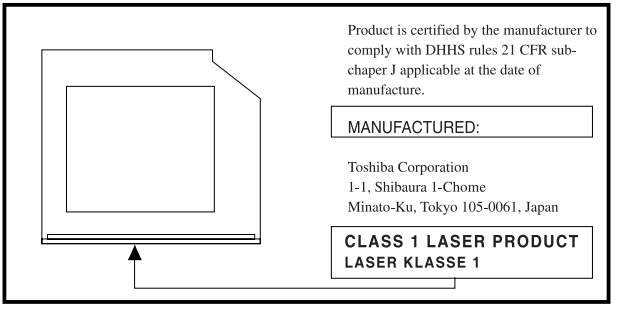
The CD-ROM, DVD-ROM and Multifunction drives employ a laser system. To ensure proper use of this product, please read this instruction manual carefully and retain for future reference. Should the unit ever require maintenance, contact an authorized service location.

Use of controls, adjustments or the performance of procedures other than those specified may result in hazardous radiation exposure.

To prevent direct exposure to the laser beam, do not try to open the enclosure.

Location of the required label

(Sample shown below. Location of the label and manufacturing information may vary.)


Product is certified by the manufacturer to comply with DHHS rules 21 CFR sub-chaper J applicable at the date of manufacture.
MANUFACTURED:
Toshiba Corporation
1-1, Shibaura 1-Chome
Minato-Ku, Tokyo 105-0061, Japan
CLASS 1 LASER PRODUCT
LASER KLASSE 1

⚠CAUTION *CAUTION: This appliance contains a laser system and is classified as a "CLASS 1 LASER PRODUCT." To use this model properly, read the instruction manual carefully and keep it for your future reference. In case of any trouble with this model, please contact your nearest "AUTHORIZED service station." To prevent direct exposure to the laser beam, do not try to open the enclosure.*

CLASS 1 LASER PRODUCT
LASER KLASSE 1

Use of controls or adjustments or performance of procedures other than those specified in the owner's manual may result in hazardous radiation exposure.

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Notice

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Introduction

Welcome to the world of powerful, portable multimedia computing. With your Toshiba notebook computer, your work can accompany you wherever you go.

Satellite M20 computers provide considerable computing power, enabling you to perform the most demanding computing tasks from any location.

You will find your operating system, Microsoft® Windows® XP Home or Microsoft® Windows® XP Professional, already installed on your computer. Your operating system offers exciting features and easy Internet access.

This guide

This guide introduces the computer's features. You can:

- Read the entire guide from beginning to end
- Skim through and stop when a topic interests you
- Use the table of contents and the index to find specific information

If you are new to computers or have not used a notebook computer before, read through this chapter to familiarize yourself with the components of the computer. After that, seek out whatever interests you most.

Safety icons

This guide contains safety instructions that must be observed in order to avoid potential hazards that could result in personal injuries, damage to your equipment, or loss of data. The safety instructions have been classified according to the seriousness of risk; the following icons highlight these instructions:

DANGER *Danger indicates a hazardous situation, which will result in death, serious personal injury, or substantial property damage if the safety instruction is ignored.*

WARNING *Warning indicates a hazardous situation, which can result in death, serious personal injury, or substantial property damage if the safety instruction is ignored.*

CAUTION *Caution indicates a hazardous situation, which will or can cause minor personal injury or property damage if the safety instruction is ignored.*

NOTE *Provides you with important but not hazard-related information.*

Other icons used

Additional icons highlight other helpful or educational information:

TECHNICAL NOTE: This icon indicates technical information about the computer.

HINT: This icon indicates helpful hints and tips.

DEFINITION: This icon indicates the definition of a term used in the text.

Other documentation

Your computer comes with the following documentation in addition to this user's guide.

- An electronic version of the user's guide. Look for the user's guide icon on your desktop or in the DOCS folder on the C: drive.
- Guides for other programs that may come preinstalled on your computer or that are available for installation on your Recovery CDs.
- For accessory information, visit Toshiba's web site at toshiba.com.
- The Microsoft® Windows® operating system documentation which explains the features of the operating system.

Service options

Toshiba offers a full line of service options built around its SelectServ™ warranty programs. For more information, visit Toshiba's Web site at toshiba.com.

If you have a problem or need to contact Toshiba, see "If Something Goes Wrong" on page 185.

Chapter 1

Finding Your Way Around

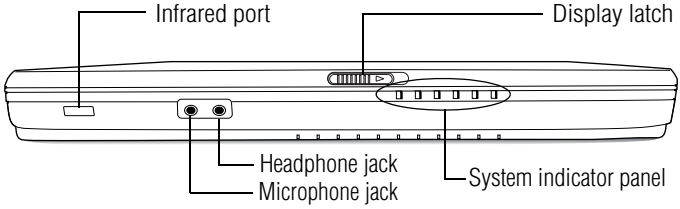
This chapter presents a grand tour of your Satellite M20 computer. It serves as a reference to locate specific parts of the computer.

Making sure you have everything

Before you do anything else, consult the Quick Start card shipped with your computer to make sure you received everything.

If any items are missing or damaged, notify your authorized Toshiba representative or your network administrator immediately. For additional help, see "If Something Goes Wrong" on page 185.

Front with the display panel closed



Sliding the **display latch** opens the computer's display panel. For more information, see "Keyboard and display features" on page 40.

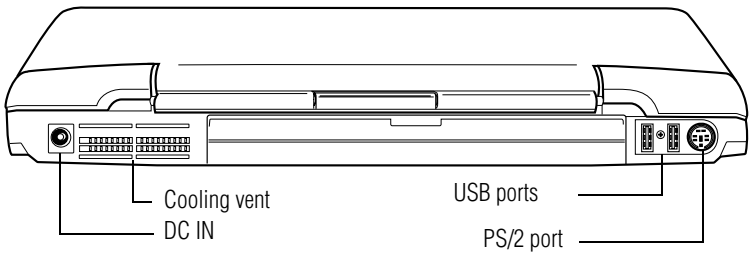
The **system indicator panel** consists of several lights that provide information about various system functions. For more information, see "Indicator panel lights" on page 42.

The **infrared port** provides a cable-free connection for transferring data between your computer and another device, such as a printer or another computer that has a compatible infrared port.

The **headphone jack** allows you to connect stereo headphones or other audio-output devices, such as external speakers, to the computer. Connecting headphones or other devices to this jack automatically disables the internal speakers.

The **microphone jack** allows you to connect an external microphone or other audio input device to the computer.

Back with rear panel closed



DC IN —Lets you plug in the AC adapter.

Cooling vent—Provides ventilation to keep the computer's processor from overheating. The vent lets the processor continue performing at its maximum speed.

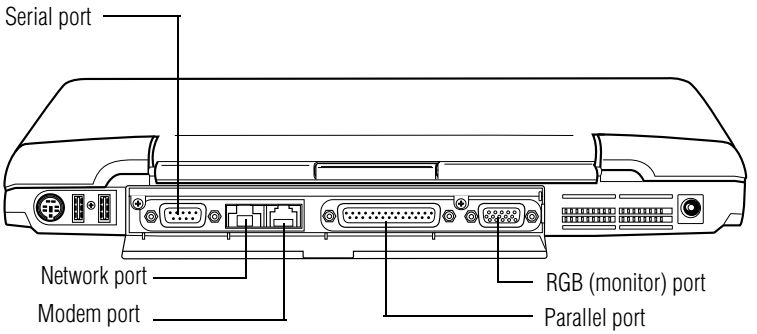
CAUTION *To prevent possible overheating of the computer's processor, make sure you do not block the cooling vent.*

USB ports—The USB (Universal Serial Bus) ports provide a connection for USB peripherals. USB is a single-cabling and connection standard that supports a data transfer rate of up to 480 mega bits per second (Mbps) for peripherals such as keyboards, pointing devices, a diskette drive and a video camera. USB allows "hot swapping" of peripherals, which means that components may be plugged and unplugged while the computer is on.

DEFINITION: USB is a peripheral expansion standard that supports a data-transfer rate of up to 480 Mbps for peripherals such as keyboards, pointing devices, and monitors. USB peripherals have a single standard for cabling and connectors.

PS/2™ port—Lets you connect an optional PS/2-compatible mouse or keyboard. You can use an optional Y-cable to connect both a mouse and a keyboard to the port.

Back with rear panel open



RGB (monitor) port—Lets you connect an external monitor or projector.

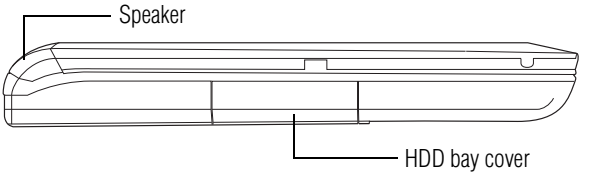
Parallel port—Lets you connect a parallel printer or other parallel device.

Modem port—Lets you connect the computer's internal modem directly to a conventional telephone line.

The **Network port** (RJ45 jack) provides access to a LAN via standard Ethernet® network cable.

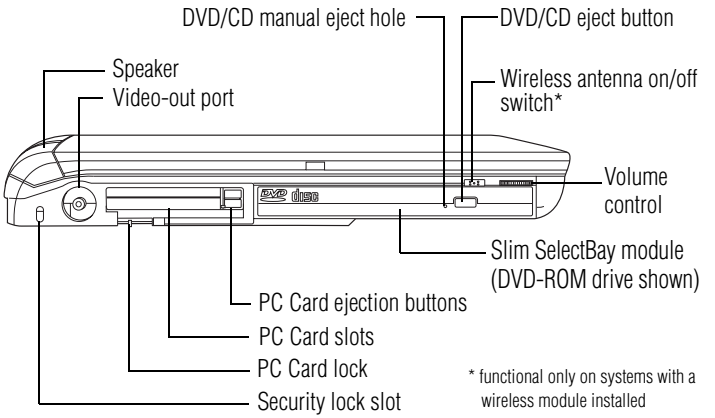
Serial port—Lets you connect a serial mouse, serial printer, or other serial device.

Right side



Speaker—Lets you hear stereo sound from a CD or DVD in addition to system alarms and audible warnings associated with your software.

Left side



Speaker—Lets you hear stereo sound from a CD or DVD in addition to system alarms and audible warnings associated with your software.

Video-out port—Lets you connect your computer to an external video device such as a standard television set.

The **security lock slot** allows you to attach the optional Port Noteworthy® Computer Lock cable to the computer to secure it to a large, heavy object such as your desk. See "Using a computer lock" on page 104

The **PC Card lock** allows you to secure your PC Cards in the slots. Slide the button to the right to lock the PC Cards.

The **PC Card slots** allow you to connect PCMCIA-compatible devices to the computer. These slots can accommodate two Type I or Type II PC Cards, or one Type III PC Card. For more information, see "Inserting and removing PC Cards" on page 80.

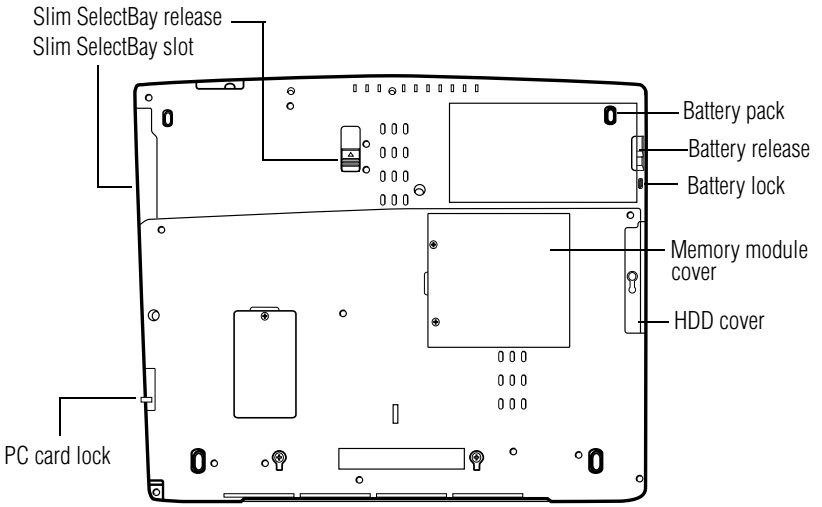
CAUTION *Keep foreign objects out of the PC Card slots. A pin or similar object that accidentally gets into a slot can damage the computer's circuitry.*

The **PC Card eject buttons** allow easy removal of PC Cards.

Slim SelectBay®— Lets you use one of several possible Slim SelectBay modules. The DVD-ROM drive is shown in place. For more information, see "Using Slim SelectBay® modules" on page 75.

Wireless antenna on/off switch (available only on Wi-Fi™ systems) — Turns the antenna on or off on your system. This is functional only on systems with a wireless module installed.

Underside



Battery pack—Lets you use your computer when a standard electrical outlet is not available. For further information about using the battery, see "Running the computer on battery power" on page 118.

Battery lock—Locks the battery in place to prevent accidental removal.

Slim SelectBay® release—Keeps the Slim SelectBay® module secure in its compartment.

Memory module—Lets you add more memory to your computer. For more information, see "Adding memory" on page 71.

Slim SelectBay® slot—The slot holds one of several interchangeable devices which offer exceptional system flexibility. For more information, see "Using Slim SelectBay® modules" on page 75.

PC Card lock—Keeps the PC Cards secure in their slots.

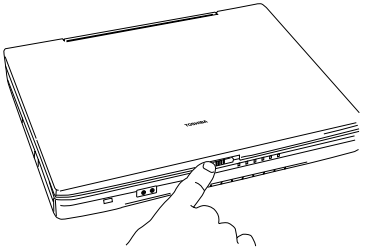
The **expansion memory cover** protects the slot in which you can install up to two memory modules. For more information on expanding your computer's memory, see "Adding memory" on page 71.

Keyboard and display features

Front with the display panel open

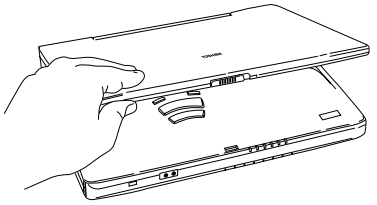
To view the front of the computer with the display panel open:

1 Locate the display latch on the front of the computer.



Releasing the display latch

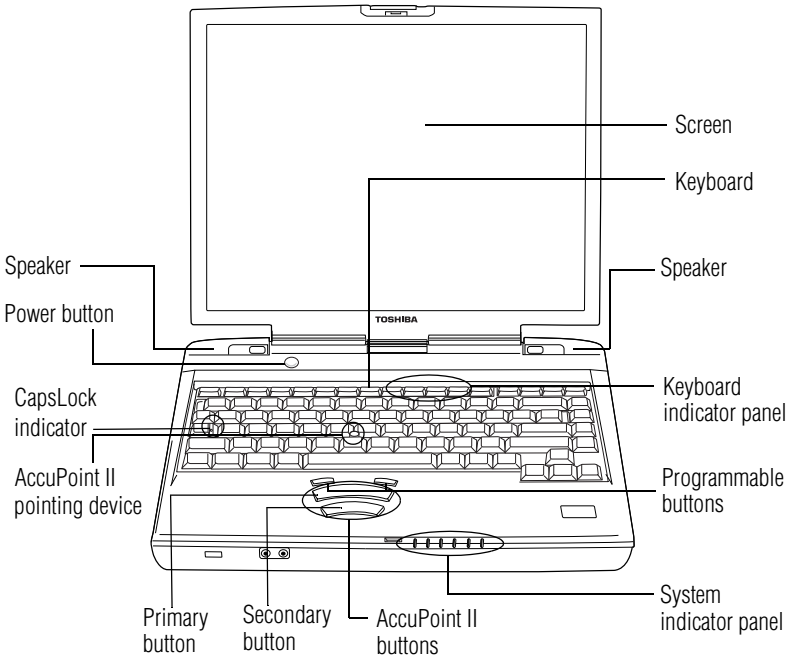
2 Slide the display latch to the right and lift the display panel.



Opening the display panel

3 Adjust the display panel to a comfortable viewing angle.

CAUTION *To avoid damaging the display panel, be careful when opening and closing it. Never force the panel beyond the point where it moves easily, and never use it to lift the computer.*



Power button —The power button is used to turn on power to the computer. For more information, see "Turning on the computer" on page 53.

Screen—The computer's screen is a liquid crystal display (LCD) that provides clear, sharp images.

Keyboard—The 85-key keyboard provides all the functionality of a full-size keyboard. It has several built-in hot-key functions that turn system functions on and off. For more information on how to use the internal keyboard, see "Using the keyboard" on page 87. For information on using an external keyboard, see "Connecting external (optional) devices" on page 150.

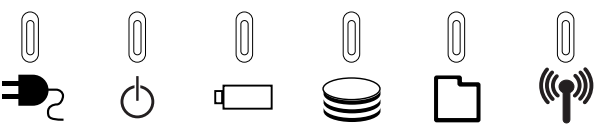
Keyboard indicator panel—These lights provide information about various keyboard functions. See "Keyboard indicator panel lights" on page 44 for a description of the panel lights.

AccuPoint® II pointing device—This device combines the function of a mouse with the convenience of never having to remove your hands from the keyboard. The AccuPoint II buttons (Primary and Secondary) work with the AccuPoint II pointing device. For further information, see "Setting up your software" on page 55.

System indicator panel—These lights provide status information about various system functions. See the following section for a description of each panel light.

Indicator panel lights

This panel is located on the front of the computer.



AC power light—Glows green when the computer is connected to an AC power source.

On/off light—Indicates whether the computer is on, off, or in a Standby power down mode.

- Glows green when the computer is on.
- Flashes amber when you power down the computer using the Standby command.
- May flash amber if the computer is overheating.

Main battery light—Indicates the status of the main battery.

- Flashes amber when you are running on battery power and the battery charge is running low.
- Does not glow when you are running on battery power and the battery charge is not running low.
- Glows amber when you are connected to AC power and the battery is charging.
- Glows green when you are connected to AC power and the battery is fully charged.

For more information, see "Monitoring battery power" on page 120.

Hard disk drive light—Flashes to indicate that the hard disk is currently in use.

Slim SelectBay indicator light—Indicates the status of a secondary battery in the Slim SelectBay, if installed.

- Glows amber when the battery is charging.
- Glows green when the battery is fully charged.
- Does not glow if there is no battery in the Slim SelectBay.

Wireless indicator light—Glows when enabled to indicate that wireless device is enabled.

Keyboard indicator panel lights

The keyboard indicator lights provide information about keyboard functions.

Cursor control light—Glows when the cursor control overlay is on. When this light is on, pressing an overlay key moves the cursor as shown by the white arrow or command printed on the left front of the key instead of the letter printed on the top of the key. For more information, see "Using the overlay for cursor control" on page 90.

Numlock light—Glows when the numeric overlay is on. When this light is on, pressing an overlay key produces the white number printed on the right front of the key instead of the letter printed on the top of the key. For more information, see "Using the overlay to type numeric data" on page 90.

Caps lock light—Glows when you press the caps lock key. When this light is on, pressing a letter key on the keyboard produces an uppercase (capital) letter. The caps lock key does not affect the number and symbol keys.

Chapter 2

Getting Started

This chapter provides tips for working comfortably, describes how to connect components, and explains what to do the first time you use your computer.

Selecting a place to work

Your computer is designed to be used in a variety of locations and situations. This section provides guidelines for setting up your computing environment.

Creating a computer-friendly environment

Place the computer on a flat surface that is large enough for the computer and any other items you need to use, such as a printer. Leave enough space around the computer and other equipment to give adequate ventilation, otherwise, they may overheat.

To keep your computer in prime operating condition, protect your work area from:

- Dust, moisture and direct sunlight

- Liquids and corrosive chemicals

CAUTION *If you spill liquid into the computer, turn it off, unplug it from the AC power source and let it dry out completely before turning it on again.*

If the computer does not operate properly after you turn it back on, contact a Toshiba service representative or your network administrator.

- Equipment that generates a strong electromagnetic field, such as large stereo speakers (other than speakers that are connected to the computer) or speakerphones.
- Rapid changes in temperature or humidity and sources of temperature change such as air conditioner vents or heaters.
- Extreme heat, cold, or humidity. Operate the computer within a temperature range of 41 degrees to 95 degrees Fahrenheit (5 degrees to 35 degrees Celsius) and 20 percent to 80 percent non-condensing humidity.

Keeping yourself comfortable

Strain and stress injuries are becoming more common as people spend more time using their computers. However, with a little care and proper use of the equipment, you can work comfortably throughout the day.

WARNING *Using the computer keyboard incorrectly can result in discomfort and possible injury. If your hands, wrists, and/or arms hurt while typing, stop using the computer and rest. If the discomfort persists, consult a physician.*

This section provides hints on avoiding strain and stress injuries. For more information, consult books on ergonomics, repetitive-strain injury, and repetitive-stress syndrome.

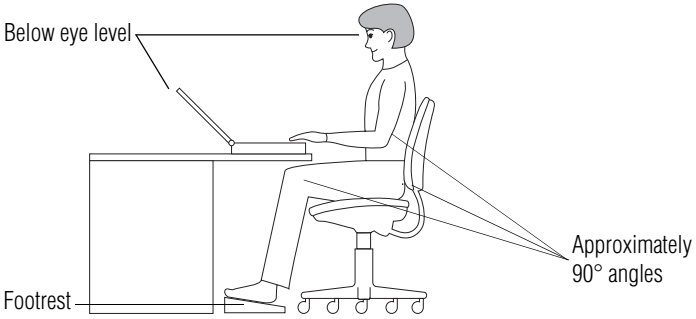
Placement of the computer

Proper placement of the computer and external devices is important to avoid stress-related injuries. Consider the following when placing your computer.

- Place the computer on a flat surface at a comfortable height and distance. You should be able to type without twisting your torso or neck and look at the screen without slouching.
- If you use an external monitor, the top of the screen should be no higher than eye level.
- If you use a paper holder, set it at the same height and distance as the screen.

Seating and posture

When using your computer, maintain good posture with your body relaxed and your weight distributed evenly. Proper seating is a primary factor in reducing work strain. Some people find a backless chair more comfortable than a conventional chair. Whichever type you choose, use the following guidelines to adjust your chair for maximum computing comfort.



Correct posture and positioning of the computer

- Position your chair so that the keyboard is at or slightly lower than the level of your elbow. You should be able to type

comfortably with your shoulders relaxed and your forearms parallel to the floor.

If you are using a conventional chair:

- Your knees should be slightly higher than your hips. If necessary, use a footrest to raise the level of your knees and ease the pressure on the back of your thighs.
- Adjust the back of your chair so that it supports the lower curve of your spine. If necessary, use a cushion to provide extra back support. Lower-back-support cushions are available at many office supply stores.
- Sit with your back straight so that your knees, hips, and elbows form approximately 90-degree angles when you work. Do not slump forward or lean back too far.

Lighting

Proper lighting can improve the readability of the display and reduce eyestrain.

- Position the display panel or external monitor so that sunlight or bright indoor lighting does not reflect off the screen. Use tinted windows or shades to reduce glare.
- Avoid placing your computer in front of a bright light that shines directly into your eyes.
- If possible, use soft, indirect lighting in your computer work area.

Arms and wrists

- Avoid bending, arching, or twisting your wrists. Keep them in a relaxed, neutral position while typing.
- Exercise your hands, wrists and arms to improve circulation.

Work habits

The key to avoiding discomfort or injury from strain is to vary your activities. If possible, schedule a variety of tasks into your working day. Finding ways to break up the routine can reduce stress and improve your efficiency.

- Take frequent, short breaks to change position, stretch your muscles, and relieve your eyes. A break of two or three minutes every half hour is more effective than a long break after several hours.
- Avoid performing repetitive activities for long periods. Intersperse such activities with other tasks.
- Focusing your eyes on your computer screen for long periods can cause eyestrain. Look away from the computer frequently and focus your eyes on a distant object for at least 30 seconds.

Other precautions

Your computer is designed to optimize safety, minimize strain, and withstand the rigors of portability. However, you should observe certain precautions to further reduce the risk of personal injury or damage to the computer.

⚠CAUTION *Do not apply heavy pressure to the computer or subject it to sharp impacts. Excessive pressure or impact can damage computer components or cause your computer to malfunction.*

CAUTION *Some PC Cards can become hot with prolonged use. If two cards are installed, both can become hot even if only one is used extensively. Overheating of a PC Card can result in errors or instability in the PC Card operation.*

Be careful when you remove a PC Card that has been used for lengthy periods of time.

Setting up your computer

TECHNICAL NOTE: You must complete all set up steps up to "Setting up your software" on page 55 before adding external or internal components to your computer. These components include, but are not limited to, a mouse, keyboard, printer, memory, and PC cards.

Your computer comes with a rechargeable battery pack that must be charged before you can use it.

To use external power or to charge the battery, you must attach the AC adapter. See "Connecting to a power source" on page 51.

To register your computer online, or to sign up for an Internet account, you must be connected to the Internet using a modem or LAN.

Before adding any of these devices to the computer, be sure to complete "Setting up your software" on page 55.

After setting up your computer, you may want to:

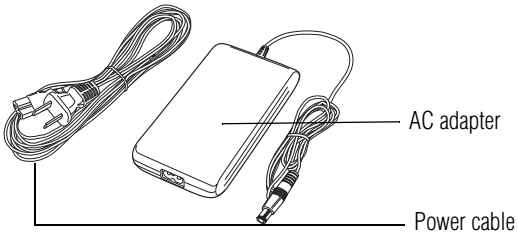
- Add more memory
- Connect a mouse
- Connect a full-size keyboard
- Connect an external monitor

- Connect a local printer
- Install PC Cards

For more information on installing specific devices, see "Connecting Other External Devices" on page 57.

Connecting to a power source

The AC adapter allows you to power the computer from an external AC power source and to charge the computer's batteries.



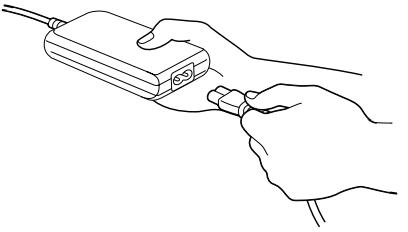
Power cable and AC adapter

CAUTION *Use only the AC adapter supplied with your computer or an equivalent adapter that is compatible. Use of any incompatible adapter could damage your computer. Toshiba assumes no liability for any damage caused by use of an incompatible adapter.*

When you connect the AC adapter to the computer, always follow the steps in the exact order as described in the User's Manual. Connecting the power cable to a live electrical outlet should be the last step; otherwise' the adapter DC output plug could hold an electrical charge and cause an electrical shock or minor bodily injury when touched. As a general safety precaution, avoid touching any metal parts.

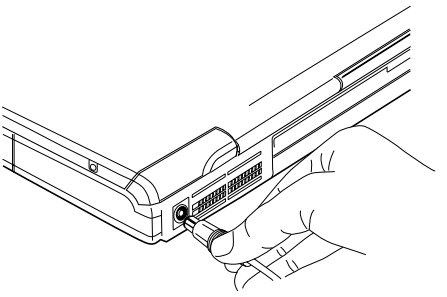
To connect AC power to the computer:

1. Connect the power cable to the AC adapter.



Connecting the power cable to the AC adapter

2 Plug the AC adapter into the DC-IN on the back of the computer..



Connecting the AC adapter cable to the computer

3 Connect the power cable to a live electrical outlet.

The AC power light on the system indicator panel glows green.

If the main battery is present, the battery light glows:

- Amber while the battery is charging
- Green when the battery is fully charged

If the battery light flashes amber during charging, either the battery pack is malfunctioning, or it is not receiving input from the AC power supply. Disconnect the AC cable and

remove the battery pack. See "If Something Goes Wrong" on page 185 for troubleshooting information.

DANGER *Damaged power cables can cause fire or electric shock. Never modify, forcibly bend, place heavy objects on top of, or apply heat to the power cable.*

If the power cable becomes damaged or the plug overheats, discontinue use. There is a risk of electric shock.

Never remove the power plug from the outlet with wet hands. Doing so may cause an electric shock.

Charging the battery

Your computer came with its battery already installed. Before using the battery to power the computer, you must charge it.

To charge the battery, leave the computer plugged in to an AC power source for at least three hours with the computer turned off. After that, the battery will be completely charged and ready to power the computer.

CAUTION *Once the battery is charged for the first time, avoid leaving the computer plugged in and turned off for more than a few hours at a time. Continuing to charge a fully charged battery can damage the battery.*

Turning on the computer

The computer is now ready for you to turn it on and begin using it.

Opening the display panel

1 Slide the display latch to the right.

2 Lift the display panel.

CAUTION *To avoid damaging the display panel, do not force it beyond the point where it moves easily, and never lift the computer by the display panel.*

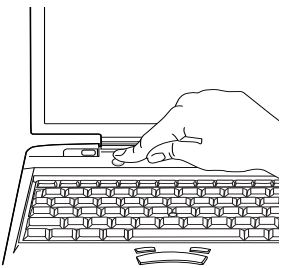
Turning on the power

To turn on the computer:

1 Make sure any external devices (such as the AC adapter, if you plan to use AC power rather than battery power) are properly connected and ready.

2 Check to ensure that any attached floppy drives are empty.

3 Press and hold the power button in until the on/off light on the system indicator panel glows green—about one second.



Turning on the power

For the meaning of each light on the system indicator panel, see "Indicator panel lights" on page 42.

4 The preinstalled operating system will load automatically.

CAUTION *When you turn on the computer for the first time, do not turn off the power again until the operating system has loaded completely.*

Setting up your software

The first time you turn on your computer, the Setup Wizard guides you through steps to set up your software.

1. From the welcome screen, click **Next** to enter the Setup Wizard.
2. Confirm acceptance of Microsoft's End User License Agreement and click **Next**.
3. Follow the on-screen directions concerning requested information about your computer and preferences.

NOTE *To register online, your computer's modem must be connected to a voice-grade telephone line, or the Internet via a Local Area Network.*

Your computer restarts automatically.

Registering your computer with Toshiba

To register your computer with Toshiba, you may either click on the desktop icon to do so electronically, or fill in and mail the registration card that shipped with your system.

Setting up other devices

You may want to take this time to set up your printer. For more information, see "Setting up your printer" on page 156.

Turning off the computer

It is generally a good idea to turn off your computer when you are not using it.

If you are using the computer for the first time, leave the computer plugged into a power source (even though the computer is off) to fully charge the main battery. With the computer off, it may take up to three hours to recharge the main battery.

Guidelines for turning off the computer:

- If you have work in progress and are not connected to a network, use the Windows® Standby command to save your system settings to memory so that, when you resume the computer, you will automatically return to where you left off.
- To leave the computer off for a longer period, you can use the Windows® Turn Off command when not connected to a domain server or the Shut down when connected to a domain server instead. For more information, see "Powering down the computer" on page 107.

CAUTION *Never turn off the computer while any drive is in use. Doing so may damage the media in use and result in loss of data.*

Closing the display panel

When you are finished, shut the computer down and close the display panel to keep dust and dirt out of the computer.

If you close the computer while it is still on, these actions will occur:

- If you have the LCD power-saver feature set, the LCD panel will automatically turn off until you open it again.
- If you have an action feature set, the computer will perform either: Nothing, Standby, or Hibernate (see "Enabling Hibernation" on page 180).

Chapter 3

Connecting Other External Devices

This chapter describes how to connect devices that can increase the capabilities of your Satellite M20 computer.

Using external display devices

Your computer comes with a built-in LCD display, but you can also connect three different types of external display devices to one of two available video ports:

- A television via the video-out (composite) port.
- A video display device, such as a video projection unit, via the video-out (composite) port.
- An external monitor or projector via the RGB (monitor) port.

Before connecting a television, video projector, monitor or other display device, configure your computer for the type of device you're connecting. To do this, refer to the documentation for your operating system and devices.

Connecting the display device

If you're connecting a television or other video display device to the computer's video-out port, first refer to "Selecting video cables" below for guidelines on choosing a video cable, then refer to "Connecting to the video-out (composite) port" on page 58.

If you're connecting an SVGA monitor, skip to "Connecting an external monitor or projector" on page 59.

Selecting video cables

To connect a device to the video-out port, you'll need to purchase a composite video cable. For the best video quality, always use a properly shielded cable.

HINT: Toshiba recommends using a cable no longer than 20 feet (approximately six meters).

Using a poor quality cable may result in a dull or fuzzy picture, poor color, ghosting, video noise, or loss of video.

Connecting to the video-out (composite) port

NOTE *Video cables are not included with your computer. To connect a device to the video-out port, you'll need to purchase a composite video cable.*

To connect the device:

1. Connect one end of the video cable to the external video device.

   Refer to the documentation provided with the device for the location of its video-in port.

2 Connect the other end of the video port adapter cable to the video-out port on the left side of the computer.

3 Connect the external device's power cable to a live electrical outlet.

4 Turn on the external video device.

5 Set the display mode by pressing Fn + F5, or by setting the Display Properties settings. For more information, see "Directing the display output when you turn on the computer" on page 59.

Connecting an external monitor or projector

You can easily attach an external monitor or projector to your computer if you need a larger screen. To do this:

1 Connect the monitor's video cable to the RGB port on the back of the computer.

2 Connect the device's power cable to a live electrical outlet.

3 Turn on the external device.

4 Set the display mode by pressing Fn + F5, or by setting the Display Properties settings. For more information, see "Directing the display output when you turn on the computer" below.

Directing the display output when you turn on the computer

Once you have connected an external display device, you can choose to use the internal display only, the external device only, or both simultaneously. The quickest way to change the display output settings is to use the display hot key (Fn + F5):

1 Press Fn and F5 simultaneously.

2 While holding down Fn, press F5 repeatedly until the setting you want is highlighted.

The selections available are:

- Built-in display only
- Built-in display and external device simultaneously
- External device only
- Built-in display and TV (or other external video device) simultaneously (only when in dual controller mode)
- TV (or other external video device) only

3 Release the Fn key for the selection to take effect.

TECHNICAL NOTE: You can also change these settings using the Display Properties Box.

Set the option for the video controller by clicking Start, then Control Panel and clicking Display. Choose the Settings tab, click the Advanced button, select Display Device, select the applicable Monitor type, click Apply or OK.

For more information on switching the display output, see "Connecting the display device" on page 159.

Adjusting the quality of the external display

To obtain the best picture quality from your television (or other video display device), you may need to adjust the video settings. See the video device documentation for additional configuration steps.

TECHNICAL NOTE: In order to use one of the simultaneous modes, you must set the resolution of the internal display panel to match the resolution of the external display device. The external display device must support a resolution of 640 X 480 or higher.

Video limitations

Keep in mind that the quality of the display will be limited to the capabilities of the external video device.

- If the external video device, such as an SVGA monitor, is capable of displaying at a maximum resolution of 640 x 480 and your system is set for a higher resolution, only part of the desktop will appear on the screen. You can view the "lost" area by scrolling to it.
- Since most televisions and video projectors overscan by 15 to 20 percent, some of the desktop will be outside the viewing area. You can view the edge of the desktop by scrolling to it.
- If you use the display hot key (Fn + F5) to change the display output with the LCD Display Stretch option enabled and the display area (resolution) set to 640 x 480 or 800 x 600, the image on the internal display panel may appear stretched.

Using an external keyboard

If you prefer to use a full-size keyboard, you can attach one to your computer. The computer's PS/2 mouse/keyboard port supports any PS/2-compatible keyboard.

CAUTION *Make sure the computer is off before you attach the external keyboard. Connecting an external keyboard with the computer's power on can damage the external keyboard, the computer, or both.*

NOTE *If you connect a PS/2 keyboard to the computer while it is in Standby mode, you will not be able to use the keyboard when you turn the computer on.*

HINT: You can only connect one PS/2 device at a time, unless you purchase an optional Y-cable. Connecting a Y-cable to the computer's PS/2 port allows you to connect a PS/2-compatible mouse and a PS/2-compatible keyboard simultaneously. Alternatively, you can connect a USB keyboard and mouse to the USB ports.

Making your external keyboard emulate the Fn key

An external keyboard does not have the Fn key contained on the Satellite M20 computer's built-in keyboard. If you use the computer's hot keys or have set up key combinations in Fn-esse®, you'll probably miss these features when using an external keyboard. Do not worry: you can use a key combination on the external keyboard to emulate the Fn key. You can set up this key combination through the Windows Control Panel Toshiba HWSetup icon. For more information about Hardware Setup, see "Toshiba Hardware Setup" on page 176.

Using a mouse

You may want to use a mouse instead of the computer's built-in pointing device, the AccuPoint II. You can use a serial mouse, PS/2-compatible mouse, or a USB mouse.

TECHNICAL NOTE: A serial mouse disables the AccuPoint II. With a PS/2 mouse, you can choose to have the AccuPoint II active at the same time.

Connecting a serial mouse

To connect a serial mouse, connect the mouse cable to the serial port at the back of the computer. Once connected, the mouse is ready to use.

Refer to your mouse documentation for configuration information.

Connecting a USB mouse

To connect a USB mouse, connect the mouse cable to the USB port on the computer. Once connected, the mouse is ready to use.

Connecting a PS/2 mouse

CAUTION *Make sure the computer is off before you attach the mouse. Connecting a PS/2 mouse with the computer's power on can damage the mouse, the computer, or both.*

If you are connecting a mouse after you have started using the computer, begin at step 1. Otherwise proceed to step 2.

1. Click **Start**, **Turn Off Computer**, then select **Turn Off**.

   The operating system shuts off the computer.

2. Attach the PS/2 mouse cable to the PS/2 port on the computer.

HINT: Using an optional Y-cable allows you to connect a PS/2 mouse and a PS/2 keyboard to the PS/2 port simultaneously.

3. Refer to your mouse documentation for configuration information.

To use both the PS/2 mouse and the AccuPoint II, set this up when you have loaded the operating system.

Using a PS/2 mouse simultaneously with AccuPoint II

When you connect a PS/2-compatible mouse to the PS/2 port, you may use the mouse, the AccuPoint II, or both.

CAUTION *When connecting any PS/2 device, turn off your computer to prevent any possible hardware damage.*

NOTE *If you connect a PS/2 mouse to the computer while it is in Standby mode, you will not be able to use the mouse when you turn the computer on.*

1. Click **Start**, **Control Panel**, then **Printers and Other Hardware**.
2. Click the **Toshiba HWSetup** icon.
3. Select the **Pointing Devices** tab.
4. Under Pointing Devices Options, select one:
   - Auto-selected — configures the PS/2 mouse to work when it is connected at power on, or the AccuPoint II to work otherwise. Auto-selected is normally the default option.
   - Simultaneous — configures both the AccuPoint II mouse and PS/2 mouse to work with the computer at the same time. You must reboot the computer for the settings to take effect.

HINT: When Auto-selected is the default, the computer can not detect a PS/2 mouse if you connect it after booting the computer.

This can be changed in Toshiba Hardware Setup.

5. Click **OK**.

A message appears stating "The changes will take effect next time the machine is rebooted. Reboot the machine now?"

6 Click **Yes**.

The computer reboots, and the PS/2 mouse is activated.

Connecting a local printer

NOTE *Read the documentation that came with your printer. Follow the manufacturer's instructions when connecting a local printer.*

NOTE *You must supply the proper printer cable. If one did not come with your printer, you may purchase one from an electronics or computer store.*

If your printer is ECP- or IEEE-compliant, make sure your printer cable is an IEEE 1284 cable.

⚠CAUTION *Your printer documentation may require you to install the printer software before physically connecting the printer to your computer. If you do not install the software as instructed by the printer manufacturer, the printer may not function correctly.*

⚠CAUTION *Never connect the printer cable while the computer's power is on. Doing so may damage the printer, the computer, or both.*

The following instructions assume you have a parallel printer.

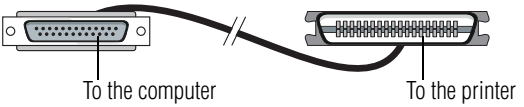
To connect the printer:

1 If the computer is on, turn it off.

If the computer is connected to an AC power source, disconnect the AC adapter.

CAUTION *Never connect the printer cable while the computer is on. Doing so may damage the printer, the computer, or both.*

2 Connect the printer cable to the printer and to the computer's parallel port. Use the printer cable illustration as a connection guide.



Identifying the ends of a parallel printer cable

3 Plug the printer's power cable into a live electrical outlet.

4 See your printer documentation for additional configuration steps.

Setting up your printer

Setting up a printer usually involves selecting a printer driver. This special program acts as a translator that turns your document into a form the printer can understand.

If you are using any non-Windows® programs, set up a printer driver for each of those programs. Refer to your program's documentation for more information.

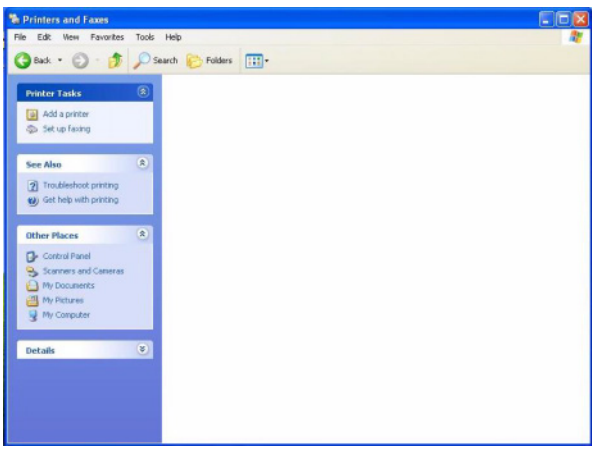
TECHNICAL NOTE: If you have the manufacturer's disk that came with your printer, you can use it to install the printer on your computer. The manufacturer's disk may include additional drivers and fonts.

TECHNICAL NOTE: Some printers require a specific installation process. In this case, the Windows® XP operating system Add Printer Wizard will display an error message. If this happens, refer to your printer installation guide for further instructions.

To set up a printer with the Add Printer Wizard:

1 Click **Start**, and click **Printers and Faxes**.

The operating system opens a Printers and Faxes window.



Sample Printers and Faxes window

2 Click **Add Printer**.

The Add Printer Wizard appears.

Add Printer Wizard
Welcome to the Add Printer Wizard
This wizard helps you install a printer or make printer connections.
If you have a Plug and Play printer that connects through a USB port (or any other hot pluggable port, such as IEEE 1394, infrared, and so on), you do not need to use this wizard. Click Cancel to close the wizard, and then plug the printer's cable into your computer or point the printer toward your computer's infrared port, and turn the printer on. Windows will automatically install the printer for you.
To continue, click Next.
< Back
Next >
Cancel

Sample Add Printer Wizard dialog box

3 Click **Next**.

The Add Printer Wizard asks you to select your printer.

TECHNICAL NOTE: If your printer is Plug and Play, the Windows® XP operating system recognizes it automatically. You can ignore the remainder of this section. See your printer manual.

4 If the printer you are setting up:

- Is not connected to a network, select **Local printer attached to this computer**.
- Is connected to a network, select **Network printer, or a printer attached to another computer**.

5 Click **Next**.

The Add Printer Wizard looks for a Plug and Play printer. If it does not locate one, click **Next**.

The Add Printer Wizard prompts you for the printer port.

6 Select the port settings according to the instructions in your printer's documentation and the port to which your printer is connected, then click **Next**.

The wizard prompts you to select your printer.

7 From the list of manufacturers and printers, select your printer, then click **Next**.

The Add Printer Wizard prompts you to enter a "friendly" printer name.

8 Enter a name for your printer.

HINT: If you are using more than one printer, make sure the name is descriptive enough to help you tell the difference.

9 If you want this printer to be:

- The default printer, click **Yes**.
- Available when specifically requested, click **No**.

10 Click **Next**.

11 Click **Finish**.

The Windows® XP operating system prints a test page.

12 To complete the setup, click **OK**.

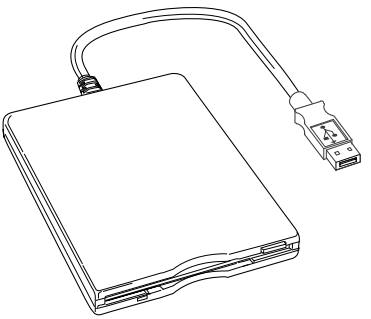
You are now ready to print. Depending on your program, you may see various messages indicating the status of your print

job. For information on printing files, see "Printing your work" on page 97.

TECHNICAL NOTE: Some printers require a specific installation process. In this case, the Windows® XP operating system Add Printer Wizard will display an error message. If this happens, refer to your printer installation guide for further instructions.

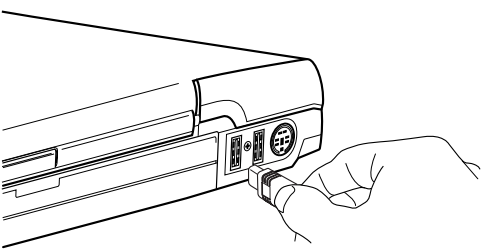
Connecting an external diskette drive

Some operations, such as creating a password service diskette, require a diskette drive designed for use with 3.5-inch diskettes.



An external USB diskette drive

To connect an optional external USB diskette drive, connect the cable to one of the USB ports.



Connecting an optional external USB diskette drive

Connecting external speakers or headphones

To attach an external stereo output device:

1. Locate the headphone jack on the front of the computer.
2. Using any necessary adapters, plug the cable from the external audio device into the headphone jack. The headphone jack requires a 3.5 mm 16-ohm stereo jack.

   When the headphone is inserted, the internal speakers are automatically disabled.

Connecting a microphone

To record high-quality sounds, you can attach a microphone:

1. Locate the microphone jack on the front of the computer.
2. Plug the microphone cord into the microphone jack.
3. Turn on the microphone.

For more information, see "Recording sounds" on page 145.

Adding memory

HINT: To purchase additional memory modules, see the accessories information packaged with your system or visit toshiba.com.

Your Satellite M20 computer is equipped with up to two memory module. The two memory slots in this computer provide various memory configurations. When additional memory is added, or original memory replaced, it is recommended that you use only compatible memory. In the event original memory is replaced with invalid memory, the system will beep and will not boot beyond the BIOS memory check. A message may display. If this occurs,

remove the invalid memory and return your machine back to its original configuration, or contact Toshiba's support center at (800) 457-7777 for additional help.

Since your computer was built to order, it should have enough memory to run your current applications. However, if your requirements change, you can install extra memory.

Installing a memory module

Additional memory modules can be installed in the memory expansion slots on the base of the computer. You will need a standard Phillips no. 1 screwdriver for this procedure.

CAUTION *Before you install or remove a memory module, turn off the computer using the Start menu. If you install or remove a memory module while the computer is in Standby or Hibernation mode, data will be lost.*

CAUTION *To avoid damaging the computer's screws, use a standard Phillips no. 1 screwdriver that is in good condition.*

The computer has two memory expansion slots — Slot A and Slot B. You can install one or two memory modules.

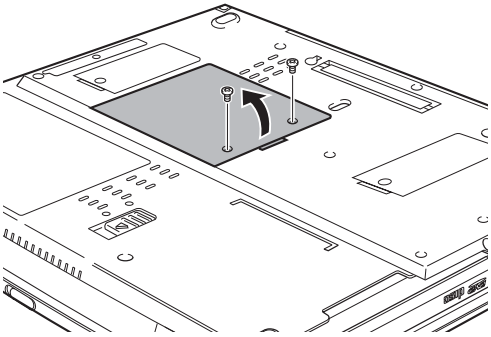
1. Shut down your computer completely using the Shut Down command. See "Powering down the computer" on page 107.
2. Unplug the computer.

CAUTION *Installing a memory module with the computer's power on may damage the computer, the module, or both.*

3 Close the display panel and remove any cables you may have connected.

4 Turn the computer upside down.

5 Locate and remove the screws that hold the cover plate in place, and lift the cover off of the memory module bay.



Removing the memory module cover

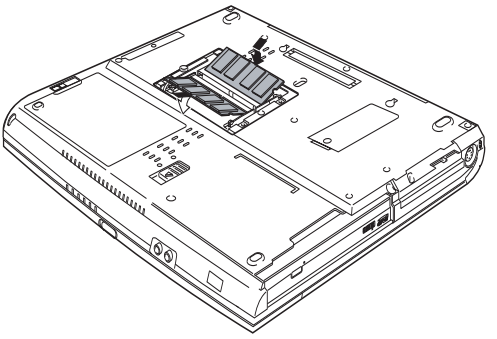
CAUTION *Static electricity can damage the memory module. Before you handle the module, touch a grounded metal surface to discharge any static electricity you may have built up.*

To avoid damaging the memory module, be careful not to touch its pin connector on the side you insert into the computer.

6 Remove the new memory module from its antistatic packaging.

7 Insert the memory module in the slot and gently press it down into place.

The clips on either side of the module will click to secure the module.



Inserting the memory module into the slot

8 Replace the cover plate and the screws.

9 Turn the computer over and restart it.

When you turn on the computer, it automatically recognizes the additional memory.

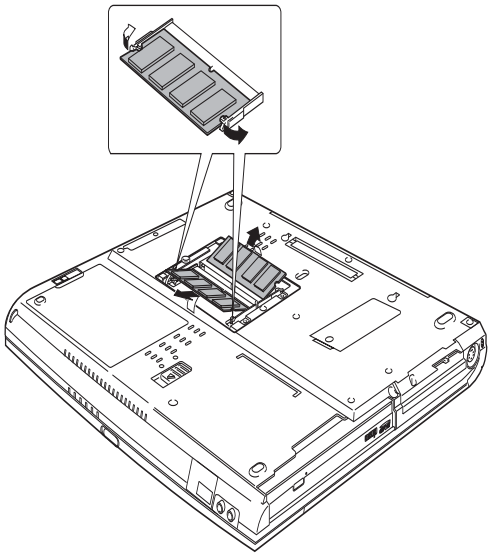
Removing a memory module

If you need to remove a memory module:

1 Complete steps 1–6 in "Installing a memory module" to shut down the computer and open the memory module cover.

2 Pull the clips away from the memory module.

The memory module pops partially out of the slot.



Pulling the clips away from the memory module

3 Carefully remove the module from the slot.

4 Replace the cover plate and screws.

5 Turn the computer over and restart it.

Using Slim SelectBay® modules

The Slim SelectBay gives you additional flexibility. By inserting and removing Slim SelectBay modules, you can configure your computer for the task at hand without having to carry unnecessary components with you when you travel. For example, any one of several modules can be used in the Slim SelectBay:

- CD-ROM drive
- DVD-ROM drive. The DVD-ROM drive can also be used as a standard CD-ROM drive.
- CD-RW drive. A writable/rewritable drive.

- DVD-ROM/CD-RW Multifunction drive with both CD-RW and DVD drive.
- Secondary battery
- Secondary hard disk drive (HDD)

HINT: Items from this list that did not come with your computer can be purchased separately. See the accessories information packaged with your system or visit toshiba.com.

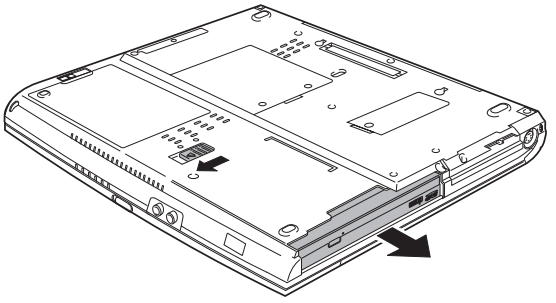
Removing a module from the Slim SelectBay®

NOTE *Use caution when lifting or turning your computer. Failure to do so may result in damage to components, such as cables, attached to your computer, or to the computer itself.*

1. Turn off the computer.

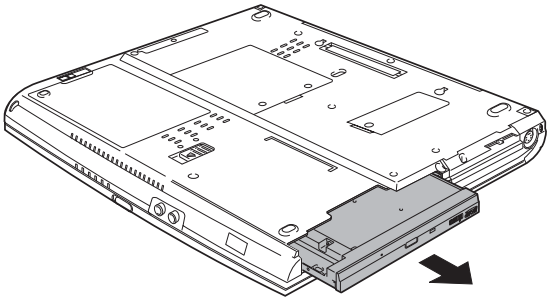
   You may also hot swap a module in the Slim SelectBay. Stop the module by clicking the **Safely Remove Hardware** icon on the System Tray. After the module is stopped, it is safe to remove.

2. Slide the Slim SelectBay ejection bar towards the front of the computer.



Unlatching the Slim SelectBay®

3 Slide the module out of the computer.



Sliding the module out

If you are removing the weight saver, retain it for transporting the computer when no other module is installed in the Slim SelectBay.

Inserting a module into the Slim SelectBay®

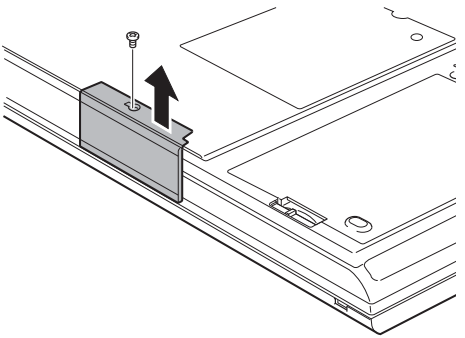
To install a module into the Slim SelectBay, simply slide the module all the way into the Slim SelectBay.

Inserting and removing hard drives

Depending upon the original hard drive installed in your computer, you may wish to increase storage capacity. You may add hard drive types based on those available for your computer. You can also additional hard drive space by inserting a drive into the select bay module.

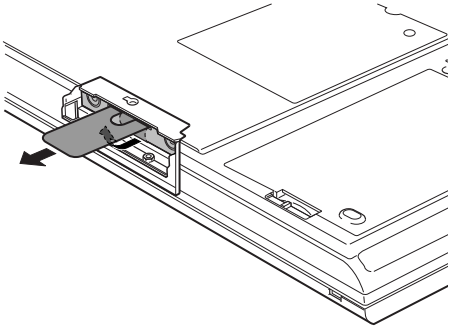
To change the internal hard drive.

1. Shut down your computer completely using the Shut Down command. See "Powering down the computer" on page 107.
2. Unplug the computer.
3. Close the display panel and remove any cables you may have connected.
4. Turn the computer upside down.
5. Remove the screw on the hard drive cover.



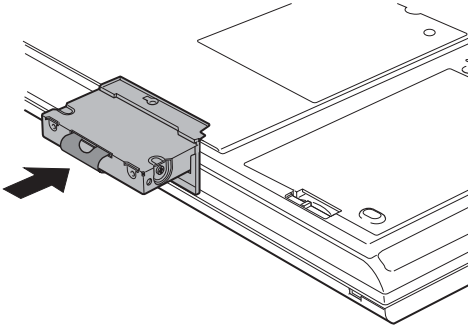
Removing the hard drive cover screw

6. Lift the hard drive bay cover to expose the hard drive.
7. Grasp the plastic tab on the exposed edge of the hard drive and pull it to remove the hard drive from the computer.



Removing the hard drive from the computer

8 Install the new hard drive by sliding it into the hard drive bay and pressing it firmly until it locks. Do not force the drive into the computer.



Inserting the new hard disk drive

9 Replace the hard drive cover and tighten the screw removed in step 5 above.

Inserting and removing PC Cards

Your Satellite M20 computer comes with two stacked PC Card slots and supports three types of PC Cards:

- Type I cards — You can install up to two of these cards, one in each slot.
- Type II cards — You can install up to two of these cards, one in each slot.
- Type III cards — You can install just one of these cards.

Inserting a PC Card

NOTE *Use caution when lifting or turning your computer. Failure to do so may result in damage to components, such as cables, attached to your computer, or to the computer itself.*

Before you insert a PC Card, refer to the documentation that comes with the card to see if you need to do anything before you insert it.

To insert a PC Card:

1. Turn off the computer.

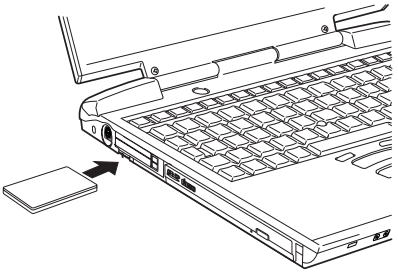
   You may also hot swap a PC Card. Stop the PC Card by clicking the **Safely Remove Hardware** icon on the System Tray. After the PC Card is stopped, it is safe to remove.

2. Locate the PC Card slot on the left side of the computer.

3. If the PC Card slots are locked, unlock them by turning the computer over, locating the PC Card lock and sliding the lock into the unlocked position.

4 Insert the PC Card.

If you have a Type III card, insert it into the lower part of the slot. If you have a Type I or Type II card, insert it into either the upper or lower part of the slot.

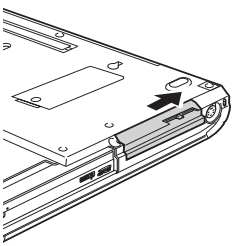


Inserting a PC Card

5 When the card is almost all the way into the slot, push firmly, but gently, to ensure a firm connection with the computer. Do not force the card into position.

6 To lock the PC Card in its slot, locate the PC Card lock and slide the lock into the locked position.

To obtain additional security for your computer, see "Using a computer lock" on page 104

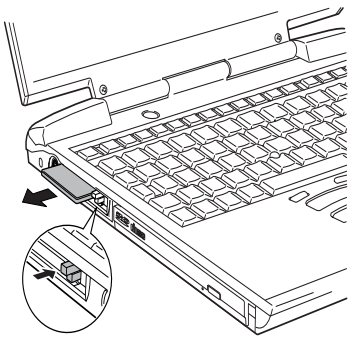


Locking the PC Card

Removing a PC Card

1. If the PC Card slots are locked, unlock them by turning the computer over, locating the PC Card lock and sliding it into the unlocked position
2. Locate the PC Card ejection button that corresponds to the slot in which your PC Card is installed.

   The top tab releases a card in the upper slot. The bottom tab releases a card in the lower slot.
3. Press the PC Card eject button once to extend it, and push it in to remove the PC Card.



Press the PC card ejection button once to extend it

   The PC Card ejects slightly from the slot.
4. Grasp the edges of the PC Card and slide it out of the slot.

Setting up a PC Card for your computer

Some PC Cards are ready to use as soon as you install them. Others, such as hard disk cards, network cards and SCSI adapters, may need to be set up to work with your computer. To set up your PC Card, refer to the documentation that came with the card or refer to your operating system manual or online help.

Connecting your modem to a telephone line

Your computer comes with a built-in modem that can be connected to a standard voice-grade telephone line.

The modem allows you to:

- Access the Internet.
- Communicate with your office's local area network (LAN), or a larger corporate wide area network (WAN).

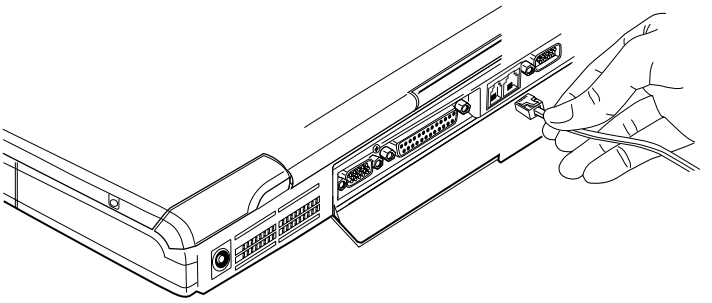
  For specific information about connecting to a LAN or WAN, consult your network administrator.
- Send a fax directly from your computer.

NOTE *For more detailed information regarding your computer's modem, visit Toshiba's web site at* toshiba.com.

Connecting to a phone line

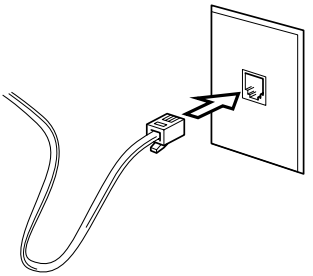
Before you can communicate using the modem, you need to connect it to a telephone line. Your computer's built-in modem port provides an RJ11 jack, allowing you to connect the modem to a standard voice-grade telephone line.

1. Plug one end of the telephone cable into the modem port on the back of the computer.



Connecting the telephone cable to the modem port

2 Connect the other end to the RJ11 wall jack.



Connecting to a wall jack

CAUTION *The modem is designed for use with a standard analog telephone line. Do not connect the modem to a digital telephone line. A digital line will damage the modem.*

Now you're ready to send a fax or use the modem to connect to an online service or the Internet.

For more information on using a modem, see "Setting up for communications" on page 135.

Chapter 4

Learning the Basics

This chapter gives some computing tips and provides important information about basic features.

Computing tips

- Save your work frequently.

  Your work stays in the computer's temporary memory until you save it to the disk. If the network you are using goes down and you must restart your computer to reconnect, or your battery runs out of charge while you are working, you will lose all work since you last saved.

  See "Saving your work" on page 95 for further information.

HINT: Some programs have an automatic save feature that can be activated. This feature saves your file to the hard disk at preset intervals. See your software documentation for details.

- Back up your files to disks (or other removable media) on a regular basis. Label the backup copies clearly and store them in a safe place.

  It's easy to put off backing up because it takes time. However, if your hard disk suddenly fails, you will lose all the data on it unless you have a separate backup copy.

- Use Error-checking and Disk Defragmenter regularly to conserve disk space and improve performance.

- Scan all new files for viruses. This precaution is especially important for files you receive via diskette, email, or download from the Internet.

- Take frequent breaks to avoid repetitive-motion injuries and eyestrain.

- Do not turn off the computer if a drive indicator light indicates a drive is active.

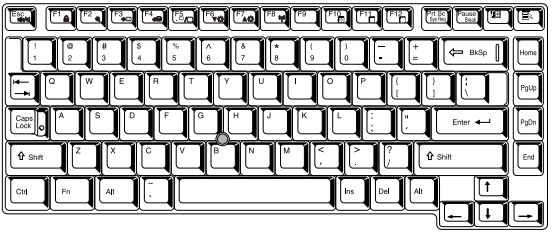
  Turning off the computer while it is reading from or writing to a disk may damage the disk, the drive, or both.

- Before turning off the computer, use the Turn Off Computer command or Standby command. See "Powering down the computer" on page 107 to learn more about Standby.

NOTE *The Windows® XP operating system records information, such as your desktop setup, during its shutdown procedure. If you do not let the Windows® XP operating system shut down normally, details such as new icon positions may be lost.*

Using the keyboard

Your computer's keyboard contains character keys, control keys, function keys, and special Windows® keys, providing all the functionality of a full-size keyboard.



Keyboard

Character keys

Typing with the character keys is very much like typing on a typewriter, except that:

- The space bar creates a space character instead of just passing over an area of the page.
- The lowercase letter l (el) and the number 1 are not interchangeable.
- The uppercase letter O and the number 0 are not interchangeable.

Making your keyboard emulate a full-size keyboard

Although your computer's keyboard layout is compatible with a standard full-size keyboard, it has fewer keys.

A standard full-size keyboard has two Enter, Ctrl, and Alt keys, editing keys, cursor positioning keys, and a numeric keypad. Pressing the Fn key simultaneously in combination with one of the specially marked keys allows you to emulate a full-size keyboard.

Your computer's keyboard has only one Enter and one Ctrl key. Most of the time this doesn't matter. However, some programs assign separate functions to the right and left Ctrl and Alt keys, or to the regular and numeric pad Enter keys on the full-sized keyboard. Using the Fn key you can simulate these separate keys, as follows:

- Press Fn and Ctrl simultaneously to simulate the Ctrl key on the right side of the enhanced keyboard.
- Press Fn and Enter simultaneously to simulate the Enter key on the numeric pad of the enhanced keyboard.

Ctrl, Fn, and Alt keys

Ctrl, Fn, and Alt keys

The Ctrl, Fn, and Alt keys do different things depending on the program you are using. For more information, see your program documentation.

Function keys

The function keys (not to be confused with the Fn key) are the 12 keys at the top of the keyboard.

The function keys

F1 through F12 are called function keys because they execute programmed functions when pressed. Used in combination with the Fn key, function keys marked with icons execute specific functions on the computer. For more information, see "Fn-esse" on page 166, or "Hot Keys" on page 215.

Windows special keys

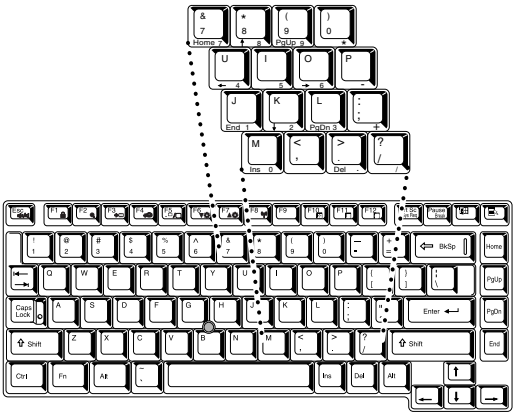
The Windows special keys

Your computer's keyboard has two keys that have special functions in Windows:

- **Start key**—Opens the Start menu
- **Application key**—Has the same function as the secondary mouse (or AccuPoint II) button

Overlay keys

The keys with gray numbers and symbols on the front of them form the numeric and cursor overlay. This overlay lets you enter numeric data or control the cursor as you would using the 10-key keypad on a desktop computer's keyboard.



Numeric and cursor control overlay

Using the overlay to type numeric data

The keys with the numbers on their right front are the numeric overlay keys.

To turn the numeric overlay on, press Fn and F11 simultaneously. The numeric mode light on the keyboard indicator panel glows when the numeric overlay is on.

You can still use the overlay keys to type alphabetic characters while the numeric overlay is on. To do so:

- For lowercase letters, hold down Fn while you type the letters.
- For uppercase letters, hold down both Fn and Shift while you type the letters.

To use the cursor control keys when the numeric overlay is on:

- Press and hold down Shift while you use the cursor control overlay keys.
- To return to the numeric overlay, release Shift.

To disable the numeric overlay, hold down the Fn key and press F11 again. The numeric mode light on the keyboard indicator panel goes out.

Using the overlay for cursor control

The keys with the gray arrows and symbols on their left front are the cursor control overlay keys.

To turn the cursor control overlay on, press Fn and F10 simultaneously. The cursor control mode light on the keyboard indicator panel glows when the cursor control overlay is on.

To type alphabetic characters while the overlay is on:

- For lowercase letters, hold down Fn while you type the letters.
- For uppercase letters, hold down both Fn and Shift while you type the letters.

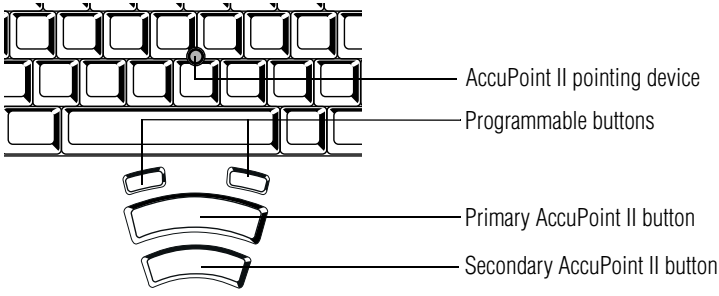
To use the numeric overlay keys while the cursor control overlay is on:

- Hold down Shift while you use the numeric overlay keys.
- To return to the cursor control overlay, release Shift.

To disable the cursor control overlay, hold down the Fn key and press F10 again. The cursor control mode light on the keyboard indicator panel goes out.

Using the AccuPoint II pointing device

The button in the middle of the keyboard is the AccuPoint II pointing device. Together with the primary and secondary AccuPoint II buttons, it provides the same functionality as a mouse — it enables you to move the cursor and to select items on the screen.



AccuPoint II pointing system

HINT: If you would rather use a mouse or trackball, you can connect one to the computer's serial port, USB port, or PS/2 port. For information, see "Using a mouse" on page 151.

To move the cursor, gently push the AccuPoint II pointing device in the direction you want the cursor to move. Pushing harder on the AccuPoint II pointing device moves the cursor faster.

The primary AccuPoint II button corresponds to the primary (typically left) mouse button. When a step instructs you to click or choose an item, move the cursor to the item, then press and release the primary AccuPoint II button. To double-click, press the primary AccuPoint II button twice in rapid succession.

The secondary button acts as the second (typically right) mouse button. The function of the secondary AccuPoint II button depends on the program you are using. Check your program's documentation to determine whether it uses the right mouse button. For more information on programming buttons and keys, see "Fn-esse" on page 166.

The small left button performs the Internet Back button.

The small right button performs the Universal scroll.

Starting a program

The easiest way to start a program is to double-click the name of the file that contains the information you want to work on. To find the file, use My Computer or Windows® Explorer.

If you prefer to open the program first, you have four options. You can:

- Double-click the icon for the program on your desktop
- Use the Start menu
- Use Windows® Explorer or My Computer to locate the program file
- Use the Run dialog box

The next three sections explain how to start a program from the Start menu, Explorer and the Run dialog box.

Starting a program from the Start menu

When you install a program, the operating system usually puts an icon in the All Programs menu. To start a program that has an icon in the All Programs menu, follow these steps, which use the Windows® Wordpad program as an example:

1. Click **Start**, then point to **All Programs**.

   The Windows® XP operating system displays the All Programs menu, which lists programs and program groups. If your program is listed, go to Step 3, otherwise, continue to Step 2.

2. Point to the program group, in this example, **Accessories**.

   The Accessories menu is displayed.

3. Click the program, in this example, **Wordpad**.

   Wordpad opens.

To close the program, click the **Close** button in the upper-right corner of the program's window.

Starting a program from Windows® Explorer

If a program is not listed in the Programs menu, you can start it from Windows® Explorer. Windows® Explorer gives you a view of your computer's contents as a hierarchy or "tree." You can easily see the content of each drive and folder on your computer. To use this method, you should know the file name and location of the program's executable file (this file ends with .exe).

This example opens Wordpad using its file name, *wordpad.exe*.

1. Click **Start**, then point to **All Programs**.
2. Click **Accessories**.
3. Click **Windows Explorer**.
4. Click **My Computer**, to expand it.

5 In the left part of the window, under the C: icon, double-click the folder containing the program, in this case **Program Files**.

Windows® Explorer shows the contents of the Program Files folder on the right side of the window. The left side of the window shows all the folders contained within the Program Files folder.

6 In the left part of the window, click **Windows XP**.

7 Click **Accessories**.

Windows® Explorer shows the contents of the **Accessories** folder on the right side of the window.

8 In the right part of the window, double-click **Wordpad**.

The operating system opens Wordpad.

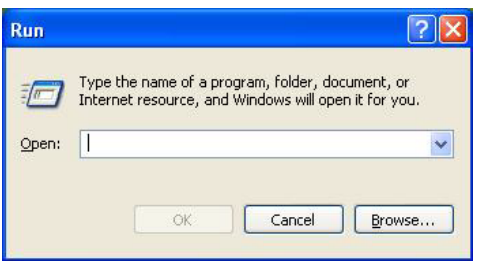
To close the program, click the **Close** button in the upper-right corner of the program's window.

Starting a program from the Run dialog box

This example uses the Run command to start Wordpad:

1 Click **Start**, then click **Run**.

The Run dialog box appears.



Sample Run dialog box

2 In the Run dialog box:

- If you know the program's location, type the command line. For a program in the Windows® folder, type just the program name. Otherwise type the full file path, then click **OK**.
- If you do not know the location, click **Browse...**. In the Browse dialog box, enter the file name (for example *wordpad.exe*) and select the drive to search. When the operating system has found the file, click **Open**.

HINT: To run the same program again, click the arrow to the right of the text box and select the command line from the drop-down list.

Saving your work

Before you turn off the computer, save your work on the hard disk drive or a diskette. This is an important aspect of computing.

TECHNICAL NOTE: Save your data even when you are using the Standby command, in case the main battery discharges before you return to work.

Saving documents is quick and easy, so it is a good idea to get in the habit of saving frequently.

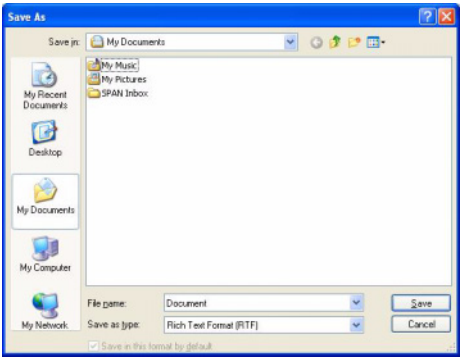
Many programs offer a feature that saves documents at regular intervals. Check your program's documentation to see if it has an automatic save feature.

Saving files

1 On the **File** menu of your Windows® program, click **Save**.

If you are working with a document that already has a file name, that's all there is to it. If you created a new document, your program displays a Save As dialog box.

Use this dialog box to specify where to store the document and to give it a file name.



A sample Save As dialog box

2 Choose the drive and folder where you want your file to be stored.

3 Type a file name, then click **Save**.

HINT: To make another copy of the file you are currently working with, choose Save As from the File menu and give the new file a different name.

The Windows® XP operating system supports file names of up to 255 characters; the names can include spaces. Some applications still require MS-DOS® file names.

File names

If you plan to share your files with a computer using a pre-Windows® 95 version of the Windows® operating system, the file name must be no more than eight characters long. Typically the file name also has an extension, consisting of a period and up to three additional characters.

You may use all the letters and numbers on the keyboard plus these characters: _ ^ $ ~ ! # % & { } ( ) @ and ‘. MS-DOS® file names are not case-sensitive and must not contain spaces.

Using a file extension

Most programs assign an extension to the file name that identifies the file as being created in the program with a particular format. For example, Microsoft® Word saves files with a .doc extension. Any file name with an extension of “.doc” is assumed to be a Microsoft® Word file. Creating your own extension is usually unwise, since the program is unlikely to recognize a strange extension and may refuse to handle your file correctly.

Printing your work

Your computer must be connected to the printer before you can print. Depending on your type of printer, you may also need to install printer software (drivers). For more information see “Connecting a local printer” on page 65.

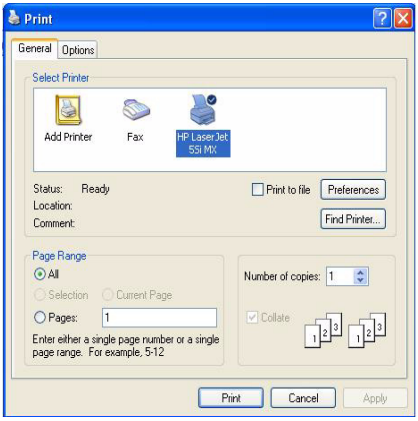
HINT: You only need to set up the printer the first time you connect it. If you use more than one printer or are changing printers, you will need to set up the Windows® XP operating system to run with the additional printer(s).

If you are connected to the printer and have installed the necessary printer software, you are ready to print.

To print a file:

1. If your printer is not on, turn it on now.
2. Open the **File** menu of your Windows® program and click **Print**.

   The program displays a Print dialog box.



A sample Print dialog box

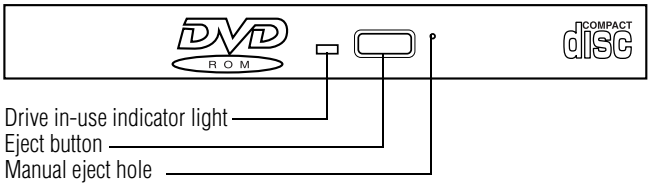
3. Specify the print parameters. For example, the range of pages and number of copies to print.
4. Click **Print**.

Using a compact disc drive

Your Satellite M20 computer may have a DVD-ROM drive or Multifunction drive.

If a DVD-ROM or Multifunction drive is not currently installed in the Slim SelectBay, follow the instructions in "Using Slim SelectBay® modules" on page 75.

HINT: Your DVD-ROM drive is set to play Region 1 (North America) DVD-ROMs.



A DVD/CD-ROM drive

Drive in-use indicator light—Indicates when the CD-ROM or DVD-ROM drive is in use.

Eject button—Press to release the disc tray. The eject button does not function when the computer's power is off.

CAUTION *Do not press the eject button or turn off the computer while the Drive in-use indicator light is glowing. Doing so could damage the disc or the drive.*

When the disc tray is open, be careful not to touch the lens or the area around it. Doing so could cause the drive to malfunction.

Manual eject hole—Use if you need to release the disc tray when the power is off. Use a straightened paper clip or other narrow object to press the manual eject button located inside the hole.

CAUTION *Never use a pencil to press the eject button. Pencil lead can break off inside the computer and damage it.*

Inserting compact discs

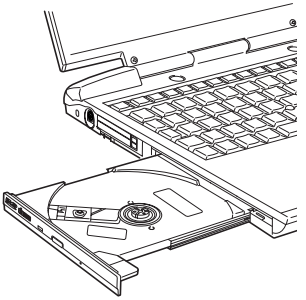
To insert a compact disc into the DVD-ROM or CD-ROM drive:

1. Make sure the computer is turned on.
2. Make sure the in-use indicator light is off.
3. Press the DVD-ROM or CD-ROM drive's eject button.

   The disc tray slides partially out of the drive (about 1 inch).

HINT: The drive will not open if the computer's power is off.

4. Grasp the tray and pull it fully open.

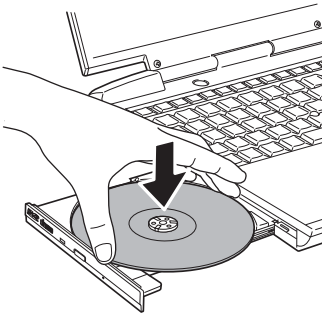


The drive tray fully extended

5. Hold the disc by its edges and check that it is free of dust.

   If the disc is dusty, clean it as described in "Caring for CDs and DVDs" on page 102.

6. Place the disc carefully in the disc tray, label side up.



Positioning the disc in the drive

7 Gently press the disc onto the center spindle until you feel it click into place.

CAUTION *Handle DVDs and CDs carefully, making contact only with the center hole and edge. Do not touch the surface of the disc. Do not stack discs. If you incorrectly handle the discs, you could lose data.*

8 Make sure the disc is completely on the spindle and is lying flat on the tray.

CAUTION *If you insert the disc incorrectly, it may jam the drive. If this happens, contact your Toshiba support for assistance.*

9 Push the disc tray in by pressing gently on the center of the tray until it clicks into place.

You are ready to use the disc.

Removing compact discs

To remove a compact disc (CD or DVD) with the computer turned on:

1. Press the eject button on the drive.

CAUTION *Do not press the eject button while the in-use indicator light is glowing. Doing so could damage the disc or the drive.*

Also, if the disc is still spinning when you open the disc tray, wait for it to stop spinning before you remove it.

2. Pull the tray until it is fully open, remove the disc, and place it in its protective cover.
3. Gently push the tray in to close it.

To remove a compact disc with the computer turned off:

1. Insert a slender object, such as a straightened paper clip, into the manual eject hole.
2. Gently pull the tray out until it is fully open, remove the disc, and place it in its protective cover.
3. Gently push the tray in to close it.

Caring for CDs and DVDs

- Store your discs in their original containers to protect them from scratches and keep them clean.
- Do not bend a disc or place heavy objects on top of it.
- Do not apply a label to, or otherwise mar the surface of a disc.
- Hold a disc by its outside edge. Fingerprints on the surface can prevent the DVD-ROM drive from reading the data properly.

- Do not expose discs to direct sunlight or extreme heat or cold.
- To clean a disc that is dirty, wipe it with a clean, dry cloth. The most efficient method to clean it is to start from the center of the disc and wipe toward the outward edge (not in a circle). If necessary, moisten the cloth with water or a neutral cleaner (not benzine or rubbing alcohol). Let the disc dry completely before inserting it in the drive.

Using PC Cards

TECHNICAL NOTE: For PCMCIA-compatible PC Cards, check the package to make sure they conform to the PCMCIA 2.1 standard (or later). Other cards may work with your computer, but are likely to be much more difficult to set up and use.

For information on inserting or removing a PC Card, see "Inserting and removing PC Cards" on page 80.

Hot swapping

With PC Cards, you can replace one PC Card with another while the computer is on. This is called "hot swapping."

Hot swapping precautions

Although you can insert a PC Card at any time, remember not to remove a card while it is in use. Otherwise, you could lose valuable information. For example:

- Do not remove a hard disk card while the system is accessing it.
- Do not remove a network card while you are connected to a network.

- Do not remove a SCSI card while any of the SCSI devices connected to it are operating.

Before removing a PC Card, stop it by clicking the **Safely Remove Hardware** icon on the System Tray. After the PC Card is stopped, it is safe to remove.

Using your computer at the office

By connecting an external monitor, external full-size keyboard, and a mouse, you can work with your notebook as if it were a standard office computer.

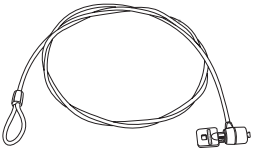
An external monitor or projector connects to the RGB port.

An external PS/2-compatible keyboard or a PS/2 mouse connects to the PS/2 port. An optional Y-cable lets you connect both devices to the port simultaneously.

Any serial device can connect to the serial port.

Using a computer lock

For your own peace of mind, you may want to secure your computer to a heavy object such as your desk. The easiest way to do this is to purchase an optional PORT Noteworthy® Computer Lock Cable.



PORT Noteworthy® Computer Lock Cable

To secure the computer:

1. Loop the cable through or around some part of a heavy object.

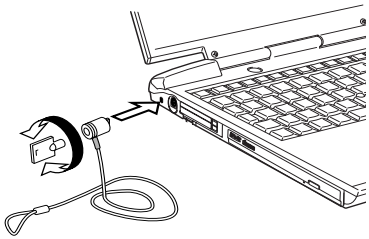
Make sure there is no way for a potential thief to slip the cable off the object.

2 Pass the locking end through the loop.

3 Slide the PC Card lock (located underneath the PC Card slots) to secure your PC Cards in place.

4 Insert the cable's locking end into the security lock slot on the computer, then give the key a quarter turn and remove it.

The computer is now securely locked. Also, any device in the PC Card slots are now secured to the computer by the locking mechanism.



Locking the computer

Caring for your computer

This section gives tips on cleaning and moving your computer. For information about taking care of your computer's battery, see "Running the computer on battery power" on page 118.

Cleaning the computer

CAUTION *Keep liquids, including cleaning fluid, out of the computer's keyboard, speaker, and other openings. Never spray cleaner directly onto the computer. Never use harsh or caustic chemical products to clean the computer.*

To keep your computer clean, gently wipe the display panel and exterior case with a lightly dampened cloth. Ask your Toshiba dealer for suggestions for appropriate cleaning products.

Moving the computer

Before moving your computer, even across the room, make sure all disk activity has ended (the drive indicator light stops glowing) and all external peripheral cables are disconnected.

CAUTION *Do not pick up the computer by its display panel or by the back (where the ports are located).*

Although your notebook computer is built to withstand reasonable shock and vibration, transport it in a carrying case for long trips. You can purchase a carrying case from your Toshiba dealer, through the accessories information packaged with your system, or visit toshiba.com.

Backing up your work

Back up all the files you create in case something happens to your computer. If you have a network partition, you can hold copies of your files there.

Alternatively, you can back up your files using a writable CD-ROM or Multifunction drive, or to diskette one at a time as you are working on them.

Preparing for communications

To connect to the Internet, use an online service, or communicate across the telephone lines with another computer, you may need:

- A modem (supplied with your computer)
- A telephone line
- A browser or communications program
- An Internet Service Provider (ISP) or an online service if you plan to use the Internet

Before you can use the modem, you must connect it to a standard voice-grade telephone line. See "Connecting your modem to a telephone line" on page 83 for details.

Powering down the computer

NOTE *Pushing the power button before shutting down the Windows® operating system could cause you to lose your work. Make sure the system indicator panel's disk light and the drive-in-use light are off. If you turn off the power while a disk is being accessed, you may lose data or damage the disk and/or drive.*

When you power down the computer, you have three options to choose from: Turn Off Computer, Standby, and Hibernation.

You can set the computer to turn on automatically at a time you designate. This option is helpful for transferring files by modem at

night. You can set the computer to turn on and send or receive the files while you are asleep. This option is called Auto Power On.

TECHNICAL NOTES: Before using any of these options to power down your computer, save your files and make sure the disk activity lights are off.

If you change your mind and decide to continue working after all, wait a few seconds before turning the computer on again.

Using Turn Off Computer

The Turn Off or Shut down command shuts the computer down completely. Use the Turn Off command when you are not connected to a domain server. Use the Shut down command when you are connected to a server.

When you start up again, the computer runs a self-test and loads the operating system. You must open any programs and files you want to use.

Factors when choosing Turn Off or Shut down:

- No power is used while the computer is shut down. This is the most efficient mode if you will be away from your computer for an extended time.
- Restarting from Turn Off or Shut down uses the most time and battery power.
- When starting up again, the system does not automatically open programs and files you were using.

To power down the computer using the Turn Off Computer command, click **Start**, **Turn Off Computer**, and select **Turn Off**.

Sample Turn Off Computer Windows dialog box

The computer shuts down completely.

NOTE *Holding the shift key while the Turn Off computer Windows dialog box is open, changes the Stand By button to hibernate. For more information about setting up hibernation* "Using Standby" on page 113.

Shutting down more quickly

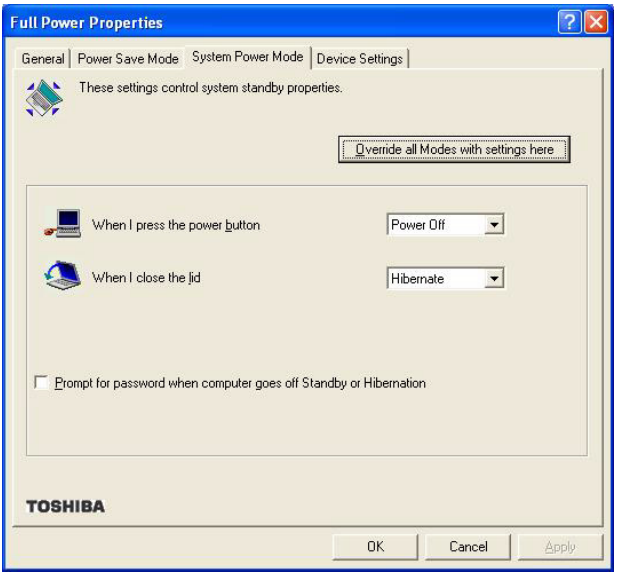
In addition, you can shut down the computer by either pressing the power button or closing the display panel.

To use either of these methods, you first need to turn it on in Toshiba's Power Saver utility.

1. Click **Start**, **Control Panel**, then **Performance and Maintenance.**

2. Click the **Toshiba Power Saver** icon.
3. In the Running on batteries section, click the **Details** button, then the **System Power Mode** tab.
4. Select the options you want from the drop-down lists.

   - **When I press the power button**
     Set this option to **Power Off** to have the computer shut down when you press the power button.



Sample system power mode settings

5 Click the **Override all Modes with settings here** button.

- Click **DC only** to apply the settings only when you are using battery power.
- Click **All** to apply the settings whenever when you are using battery power or outlet power.

6 Click **OK**,

7 Click **OK** again, then close the Control Panel.

NOTE *For more information about the Power Saver utility, see* "Toshiba Power Saver utility" on page 179.

Starting again after Shut down

To start the computer up again, press the power button until the on/off light changes to green.

If you shut down the computer by closing the display panel, you can start it again by opening the display panel.

Using Hibernation

Hibernation mode shuts the computer down completely, but it first saves the current mode of the computer to the hard disk. Since Hibernation mode does not require power to maintain the saved information, the system settings are retained indefinitely. Restoring information from the hard disk takes longer than restoring it from memory. When you start up again, the computer runs a self-test, loads the operating system, and then returns to the mode in which you left it.

Factors to consider when choosing Hibernation:

- While in Hibernation mode, the computer uses no battery power
- Because the mode of the system is held on the hard disk, no data is lost if the main battery discharges
- When starting up again, Hibernation uses less time and battery power than does Turn Off Computer
- Restarting from Hibernation uses a little more time and battery power to start up than restarting from Standby, because information is being retrieved from the hard disk rather than from memory
- When starting up again, the computer returns to the mode in which you left it, including all open programs and files you were using

Configuring your computer for Hibernation:

1. Click **Start**, **Control Panel**, then **Performance and Maintenance.**

2. Click the **Toshiba Power Saver** icon.
3. In the Running on batteries area, click the **Details** button.
4. Click the **System Power Mode** tab.
5. Select **Hibernation** for the options you want.

   - **When I press the power button**
     Set this option to Hibernation so that the computer will go into Hibernation mode when you press the power button.
   - **When I close the lid**
     Set this option to Hibernation so that the computer will go into Hibernation mode when you close the display panel.

6. Click the **Override all Modes with settings here** button.

- Click **DC only** to apply the settings only when you are using battery power.
- Click **All** to apply the settings whenever when you are using battery power or outlet power.

7. Click **OK**.
8. Click the **Hibernate** tab, and then click the **Enable hibernate support** checkbox (this is the default setting).
9. Click **Apply**.
10. Click **OK**.
11. Click **OK** again, then close the Control Panel.

The computer is now set to automatically go into Hibernation when your option settings occur.

NOTE *For more information about the Power Saver utility, see* "Toshiba Power Saver utility" on page 179.

Once the computer is configured, put the computer into Hibernation mode by either pressing the power button or closing the display panel, depending on the hibernation options taken.

Starting again from Hibernation mode

To start up the computer from Hibernation mode, press the power button until the on/off light turns green. The computer returns to the screen you were using.

If you put the computer in Hibernation mode by closing the display panel, you can start it again by opening the display panel.

Using Standby

The Standby command puts the computer into a power-saving mode. Standby holds the current mode of the computer in memory so that, when you restart the computer, you can continue working from where you left off.

Factors to consider when choosing Standby:

- While in Standby mode, the computer uses some battery power. A fully charged main battery will last up to eight hours in Standby mode.
- Restarting from Standby uses less time and battery power than restarting from Turn Off Computer or Hibernation.

- When starting up again, the computer returns to the mode in which you left it, including all open programs and files you were using.

NOTE *If you power down using the Standby command and the main battery discharges fully, your information will be lost. Be sure to save your work first.*

To power down the computer using the Standby command, click **Start**, **Turn Off Computer**, and select **Stand By**.

Sample Turn Off Computer Windows® dialog box

NOTE *If you hold down the shift key, StandBy becomes Hibernate in the Turn Off Computer dialog box. To enter hibernation mode, hold down the shift key while you select Hibernate.*

The computer saves the status of all open programs and files, turns off the display, and goes into a low-power mode. The on/off light blinks amber indicating the machine is in Standby mode.

Going into Standby mode more quickly

In addition, you can put the computer into Standby mode by either pressing the power button or closing the display panel. You can also specify an amount of time after which the computer automatically goes into Standby mode.

To use any of these methods, you first need to enable them in Toshiba's Power Saver utility.

1. Click **Start**, **Control Panel**, then **Performance and Maintenance.**

2. Click the **Toshiba Power Saver** icon.
3. In the Running on batteries area, click the **Details** button, then select the **System Power Mode** tab.
4. Select **Standby** for the options you want.
   - **When I press the power button**
     Set this option to Standby to put the computer into Standby mode when you press the power button.
   - **When I close the lid**
     Set this option to Standby to put the computer into Standby mode when you close the display panel.
5. Click **Override all Modes with settings here.**
6. In the Set to range dialog box, click on one of these options:
   - Click **DC only** to apply the settings only when you are using battery power.
   - Click **All** to apply the settings whether you are using battery power or outlet power.
7. Click **OK**.

8 Click **OK** again, then close the Control Panel.

NOTE *For more information about the Power Saver utility, see* "Toshiba Power Saver utility" on page 179.

Starting again from Standby mode

To start up the computer from Standby mode, press the power button until the on/off light changes to green. The computer returns to the screen you were using.

If you put the computer in Standby mode by closing the display panel, you can start it again by opening the display panel.

Toshiba's online resources

Toshiba maintains a number of online sites to which you can connect. These sites provide information about Toshiba products, give help with technical questions and keep you up to date with future upgrades. For more information, see "Contacting Toshiba" on page 210.

Chapter 5

Mobile Computing

Toshiba's energy-saver design

Your computer enters a low-power mode when it is not being used, thereby conserving energy and saving money in the process. It has a number of other features that enhance its energy efficiency. Many of these energy-saving features have been set by Toshiba. We recommend you leave these features active, allowing your computer to operate at is maximum energy efficiency, so that you can use it for longer periods of time while traveling.

For more information on managing your power usage, see "Power usage modes in Windows XP" on page 129.

This chapter covers all the aspects of using your computer on battery power.

Running the computer on battery power

The computer contains a removable lithium ion (Li-ion) battery pack that provides power when you are away from an AC outlet. This is the main battery. You can recharge it many times.

Battery Notice

To ensure that the battery maintains its maximum capacity, operate the computer on battery power at least once a month until the battery is fully discharged. Please see "Maximizing battery life" on page 126 for procedures. If the computer is continuously operated on AC power, either through an AC adapter or a docking station (if applicable to your system), for an extended period (more than a month) the battery may fail to retain a charge. This may shorten the life of the battery, and the battery light may not indicate a low-battery condition.

In addition to the main battery, you may also have a second battery installed in the Slim SelectBay. If you travel and need to work for many hours without an AC power source, you may purchase a battery module for use in the computer's Slim SelectBay, or carry additional charged battery packs with you.

The computer also has an internal real-time-clock (RTC) battery.

The RTC battery powers the RTC memory that stores your system configuration settings and the current time and date information. It maintains this information for up to a month while the computer is turned off.

Charging the batteries

To charge the main battery while it is in your computer, plug the computer into a live electrical outlet. The battery charges whether the computer is on or off.

The main battery light (▭) glows amber while the battery is being charged, and glows green when it is fully charged.

The battery may not start charging immediately under the following conditions:

- The battery is extremely hot or cold. To ensure that the battery charges to its full capacity, wait until it reaches room temperature.
- The battery is almost completely discharged. Leave the power connected and the battery should begin charging after a few minutes.

The main battery charges the RTC battery.

During normal use, the main battery keeps the RTC battery adequately charged. Occasionally, the RTC battery may lose its charge completely, especially if you've had the computer turned off for a long time.

TECHNICAL NOTE: The RTC battery does not charge while the computer is turned off, even when AC power is attached.

Monitoring battery power

The computer's main battery light gives you an indication of the main battery's current charge:

- Green indicates the AC adapter has fully charged the battery.
- Amber indicates the AC adapter is charging the battery.
- Off indicates that the battery is not being charged.

NOTE *Battery life and charge time may vary depending upon power management settings, applications and features used.*

- Flashing amber indicates that the computer is using battery power, and the battery's charge is running low.

HINT: Be careful not to confuse the battery light (▭) with the on/off light (⏻). When the on/off light flashes amber, it indicates that the system is suspended (using Windows® XP Standby command).

Displaying remaining battery power

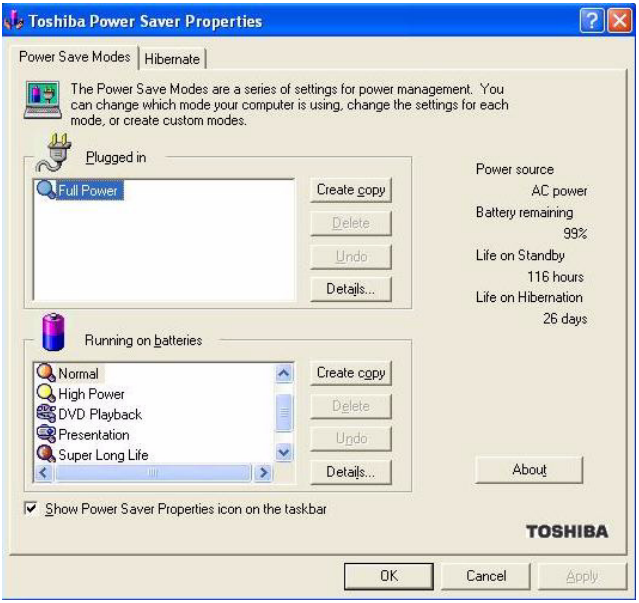
You can monitor the battery's remaining charge. The computer calculates the remaining battery charge as it operates, based on your current rate of power use.

To show remaining power:

1. Click **Start**, **Control Panel**, then **Performance and Maintenance**.

2. Click the **Toshiba Power Saver** icon.

   The Toshiba Power Saver Properties dialog box appears.



Sample Toshiba Power Saver Properties Dialog Box

The Power Save Modes tab displays the remaining amount of time for each of the different power usage modes.

With repeated discharges and recharges, the battery's capacity will gradually decrease. A frequently used older battery will not power the computer for as long as a new battery, even when both are fully charged.

HINT: Wait at least 16 seconds after turning on the computer before trying to monitor the remaining battery power. The computer needs this time to check the battery's remaining capacity and perform its calculations.

WARNING *The computer drains battery power more quickly at low temperatures. Check your remaining charge frequently if you're working in temperatures below 50 degrees Fahrenheit.*

The Windows® operating system has additional power management options that can be accessed through an icon in the Control Panel. For more information, see "Toshiba Power Saver utility" on page 179.

What to do when the battery alarm sounds

Your Satellite M20 computer can be configured to warn you of a low battery charge condition so you may take the necessary steps to save your work.

You Windows® operating system offers two alarms before your system shuts down.

To change the default alarm settings:

1. Click **Start**, **Control Panel**, then **Performance and Maintenance**.
2. Click the **Toshiba Power Saver** icon.
3. Select the appropriate **Running on Batteries** option.
4. Click the **Details...** button.

5 Select the **Alarms** tab and adjust the settings to suit your needs.

Before your computer runs out of battery power, save your data and take one of the following actions:

- Suspend or shut down your computer.
- Shut down your computer and replace the main battery with a charged one.
- Install a secondary battery module in the computer's SelectBay.
- Connect your computer to an AC power source.

Changing batteries

CAUTION *When handling battery packs, don't drop or knock them. Also be careful not to damage the casing or short-circuit the terminals.*

To change the battery:

1 Save your work.

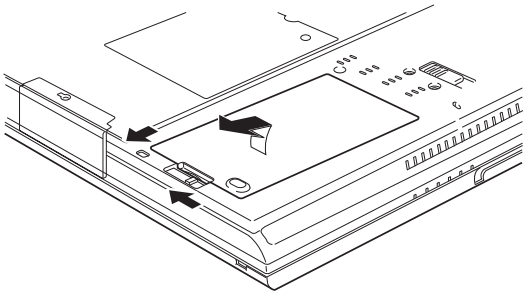
2 Shut down and turn off the computer.

3 Remove all cables connected to the computer.

4 Turn the computer over.

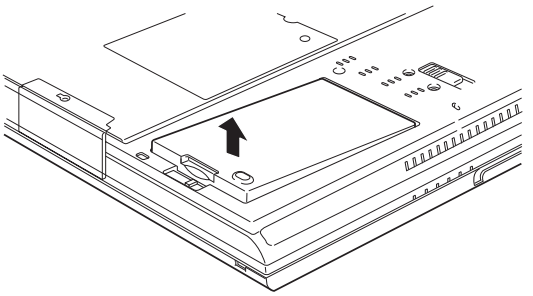
5 If the battery lock is in the locked position (towards the center of the computer), slide it towards the edge of the computer to unlock it.

6 Slide the battery release latch to release the battery.



Battery release latch

7 Pull the discharged battery module out of the computer.



Removing the discharged battery

WARNING *If the battery is leaking or its case is cracked, put on protective gloves to handle it, and discard it immediately following the advice in* "Disposing of used batteries" on page 127.

8 Insert the charged battery into the slot until the latch clicks.

The battery pack has been designed so that you cannot install it with reverse polarity.

CAUTION *If the battery does not slide into the slot easily, move the battery release lock to the unlocked position and try again. Do not force the battery into position.*

9 Reset the battery lock to the locked position.

10 Turn the computer right side up.

11 Reconnect any cables.

12 Restart the computer.

Taking care of your battery

The following sections offer tips on how to take care of your battery and prolong its life.

Safety precautions

- If the battery pack produces an odor, overheats or changes color or shape while it is being used or charged, turn off the computer's power immediately and disconnect the power cord from the power socket. Carefully remove the battery pack from the computer.
- Do not try to disassemble a battery pack.
- Do not overcharge or reverse charge a battery. Overcharging will shorten its life, and reverse charging could damage it.
- Avoid touching the metal terminals of the battery with another metal object. Short-circuiting the battery can cause it to overheat and may cause damage to the battery or the computer.

- Do not incinerate a spent battery, as this could cause it to explode and release toxic materials.
- If a battery is leaking or damaged, replace it immediately. Use protective gloves when handling a damaged battery.
- To replace the main battery, use an identical battery that you can purchase through toshiba.com.
- Reverse Polarity should be avoided with all batteries. The main battery is designed so that it cannot be installed in reverse polarity.
- Charge the battery pack only in the computer or in a battery charger designated as an approved option.
- When you install the battery pack, you should hear a click when it is seated properly.
- Do not expose the battery pack to fire. The battery pack could explode.

Maximizing battery life

To maximize the life of your battery pack:

- At least once a month, disconnect the computer from a power source and operate it on battery power until the battery pack fully discharges. Before doing so, follow the steps below:

  1. Turn off the computer's power.
  2. Disconnect the AC adapter and turn on the computer's power. If it does not turn on, go to step 4.
  3. Operate the computer on battery power for five minutes. If the battery pack has at least five minutes of operating time, continue operating until the battery pack is fully discharged. If the battery light LED flashes or there is some other warning to indicate a low battery, go to step 4.

4. Connect the AC adapter to the computer and the power cord to a power outlet. The DC IN or AC power-light LED should glow green, and the Battery LED should glow amber to indicate that the battery pack is being charged. If the DC IN or AC power-light indicator does not glow, power is not being supplied. Check the connections for the AC adapter and power cord.
5. Charge the battery pack until the Battery LED glows green.

- If you have extra battery packs, rotate their use.
- If you will not be using the system for an extended period, more than one month, remove the battery pack.
- Disconnect the AC adapter when the battery is fully charged. Overcharging makes the battery hot and shortens life.
- If you are not going to use the computer for more than eight hours, disconnect the AC adapter.
- Store spare battery packs in a cool dry place out of direct sunlight.

Disposing of used batteries

The life of a battery pack should last for years. When the battery pack needs replacing, the main battery light flashes amber shortly after you have fully recharged the battery.

You must discard a battery pack if it has become damaged.

⚠CAUTION *The computer uses a lithium ion battery, which can explode if not handled or disposed of properly. Putting spent batteries in the trash is not only irresponsible, it may also be illegal. Dispose of the battery as required by local ordinances or regulations.*

Your company may have a procedure for disposing of used batteries safely. Otherwise, the materials that came with your computer may include an insert regarding the disposal of batteries. If not, check with your local government for information on where to recycle or dispose of old batteries.

If you cannot find the information you need, contact your network administrator for assistance.

Conserving power

How long a fully charged battery pack lasts when you are using the computer depends on a number of factors, such as:

- How the computer is configured.
- How much you use the hard disk, DVD-ROM/CD-ROM, and diskette drives, or other optional devices.
- Where you are working, since operating time decreases at low temperatures.

There are various ways in which you can conserve power and extend the operating time of your battery:

- Enable Standby or Hibernation, which saves power when you turn off the computer and turn it back on again.
- Use Toshiba's power-saving options.

These power-saving options control the way in which the computer is configured. By using them, you can greatly increase the length of time you can use the computer before you need to recharge the battery.

Toshiba has combined these options into preset power usage modes. Using one of these modes lets you choose between maximum power savings and peak system performance. You may also set individual power-saving options to suit your own needs.

The following sections describe how to choose a power usage mode and discuss each power-saving option.

Power usage modes in Windows XP

In Windows® XP, you can choose from predefined power usage modes or select your own combination of power management options. To do this:

1. Click **Start**, **Control Panel**, then **Performance and Maintenance**.
2. Click the **Toshiba Power Saver** icon.
3. Open the Power Save Modes tab and set your options.

   For more information, see "Toshiba Power Saver utility" on page 179.

Using a hot key to set the power usage mode

You may use a hot key to set the power usage mode.

To set the power usage mode:

1. Press Fn and F2 simultaneously to display the power usage pop-up window.

Sample Power usage mode pop-up window

2. While continuing to press Fn, press F2 until you select the desired power usage mode.

   The power usage modes under battery power are: Long Life, Normal, High Power, DVD-Playback, Presentation, and Super Long Life.

   The power usage mode under AC power is Full Power only.

3. Release the Fn key.

The pop-up window disappears. You're now in the selected mode.

For more information on setting the battery power usage mode, see "Toshiba Power Saver utility" on page 179.

Additional options for power

Depending on the amount of time you spend away from external power sources, the capacity of one battery pack may be sufficient for your needs. However, if you need more portable power, Toshiba provides these options:

- Purchase extra battery packs.
- Install a secondary battery module in the Slim SelectBay. See "Using Slim SelectBay® modules" on page 75
- Purchase a battery charger that charges one main battery pack and one secondary battery module at a time.

Chapter 6

Exploring Your Options

In this chapter, you will explore some of the special features of your Satellite M20 notebook computer.

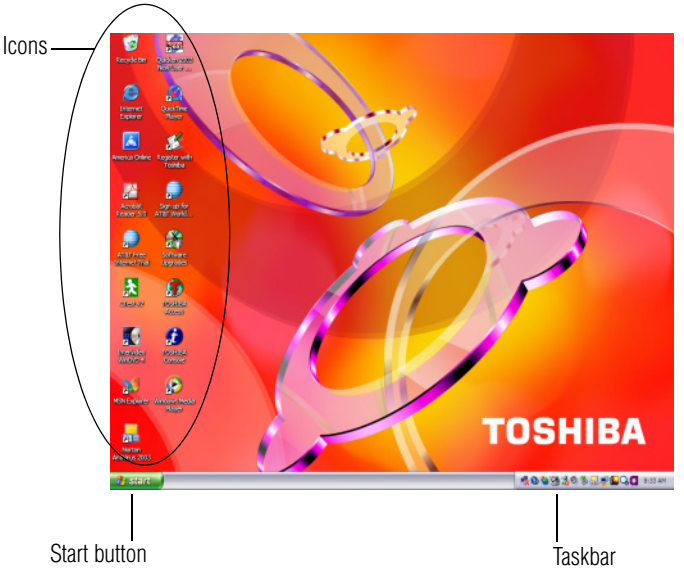
Exploring the desktop

The desktop is the launching pad for everything you can do in the Windows® XP. You use its features to start programs, find documents, set up system components, and perform most other computing tasks.

HINT: The illustrated examples in this guide may appear slightly different from the screens displayed by your system. The differences are not significant and do not indicate any change in the functionality of your system.

Finding your way around the desktop

Common desktop features include icons, the Start button, and the taskbar.



Sample Windows® XP operating system desktop

Icons

An icon represents a file or program that can be quickly activated by double-clicking the icon. The icons initially displayed on your Windows® XP operating system desktop include:

Recycle Bin — Holds files you've deleted. You may be able to retrieve these files until you empty the Recycle Bin.

TECHNICAL NOTE: If you delete a file from a diskette, it does not go into the Recycle Bin. For more information on the Recycle Bin, see Windows® Help.

Internet Explorer — The Microsoft® browser that provides access to the Internet.

Your desktop may contain other icons depending on your configuration. See Windows® XP online Help for more specific information on each icon and how to use it.

Start button

You use the Start button to:

- Start programs
- Access Microsoft® Windows® XP operating system update information
- Open documents
- Adjust system settings
- Find files
- Access Windows® Help
- Run programs
- Suspend system activity and shut down the computer

Taskbar

Each time you open a program, a button associated with that program appears on the taskbar. With some programs, a button appears on the taskbar for each document or window you open. You can use these buttons to quickly switch between the programs or windows.

To make a program or window the currently active one, click the associated taskbar button.

You can personalize the taskbar to include not only shortcut icons but also your favorite Internet URL addresses.

DEFINITION: URL stands for Uniform Resource Locator, which is the address that defines the route to a file on the Web or any other Internet facility. Generically, it is known as the Web site address.

System tray

The System tray displays icons of tasks or programs that run continuously in the background. To learn more about each task, position the cursor over the icon for a few moments and a short description of the task appears.

Typical tasks in the System tray are Current time, Power usage mode, Mouse properties, and speaker volume.

To activate a specific task, double-click the appropriate System tray icon.

Exchanging data with another computer

To transfer a large amount of information between computers, you can use the Windows® XP Briefcase, or a specialized synchronization program and the computer's parallel port.

Transferring files

You can transfer files to another computer using your infrared port, or with an adapter cable.

To transfer files through the parallel port, you need an optional LapLink® compatible parallel cable.

To transfer files:

1 Connect the cable.

2 Load the transfer program on both computers.

3 Set any specific options.

4 Start the transfer.

5 When you have finished transferring files, close the programs on both computers.

Getting help transferring files

1 Click **Start**, then **Help and Support**.

2 Click the **Index** icon on the toolbar.

3 In the dialog box, type direct cable connection.

4 Follow the online guide instructions.

Setting up for communications

In order to connect to the Internet, use an online service, or communicate across the telephone lines with another computer, you need:

- A modem (one comes with your Satellite M20 computer)
- A telephone line
- A browser or communications program
- An Internet Service Provider (ISP) or online service if you plan to use the Internet

Determining the COM port

Your modem is connected to one of the computer's COM (communications) ports. The default setting for the modem is COM3.

The following procedure is intended to support you if you need to either upgrade your modem or reset the port to the default settings.

DEFINITION: Although the terms are often used interchangeably, the serial port and COM port are really two different things. The serial port is the physical port on the back of the computer. The COM port is a unique identifier the computer uses to communicate with the serial port or other serial devices.

If you're having trouble connecting through the modem, you may need to determine the current COM port name and possibly change it.

To find out which port your modem is connected to:

1. Click **Start**, **Control Panel**, then **Printers & Other Hardware**.
2. Click **Phone and Modem Options**.

   The **Phone and Modem Options** Properties dialog box displays.
3. Click the **Modems** tab.

   Your modem should be listed next to one of the computer's COM ports.
4. Make a note of the COM port number.
5. To verify that the modem is set up properly, select the modem you wish to check and then click **Properties** to bring up the dialog box with information specific to that modem.
6. Click the **Diagnostics** tab, and then click **Query Modem**.

   Windows XP communicates with the modem and displays identifying information reported by the modem. If Windows XP cannot communicate with the modem, it displays an error message. If you receive an error message, consult the

troubleshooting sections of your modem and Windows XP documentation.

7 Click **OK** to close the properties dialog box for that specific modem.

8 Click **OK** to close the Modem Properties dialog box.

9 Close the Control Panel.

Connecting the modem to a telephone line

Before you can use the modem, you must connect it to a standard voice-grade telephone line. For more information, see "Connecting to a phone line" on page 83.

Connecting your computer to a network

You can connect your computer to a network to increase its capabilities and functionality using one of its communication ports.

Accessing a network

To access a network:

- At the office, connect an Ethernet cable to the RJ45 jack on your computer. For specific information about connecting to the network, consult your network administrator.
- While you are at home or traveling, you need a dial-up connection. Ask your network administrator for the telephone number of the network.
- To wirelessly access a network, you need an optional wireless networking PC Card or an optional Wi-Fi™ module. For more information about wireless networking, refer to your wireless network device documentation or contact your authorized Toshiba service provider.

Setting up the connection

To set up an office connection, consult your network administrator for network settings and additional considerations.

To set up a dial-up connection, use the New Connection Wizard:

1. Click **Start** and point to **All Programs**.
2. Point to **Accessories**, then to **Communications**, and click **New Connection Wizard**.
3. Enter the phone number of your network connection and let the program dial the number.

   The computer connects to the network.

Using the Ethernet LAN Port

When your computer starts, Windows attempts to contact a Dynamic Host Configuration Protocol (DHCP) server. If the computer is not connected to a network, it may pause a few minutes as it waits for a reply. To avoid this delay, you can reconfigure Windows to disable the LAN port.

To disable the LAN port:

1. Click **Start**, **Control Panel**, then **Performance and Maintenance**.
2. Click the **System** icon.
3. Click the **Hardware** tab, and then click the **Device Manager** button.
4. Select the network adapter in **Network Adapters**.
5. Click the **Properties** icon on the toolbar.
6. Select the **Do not use this device (disable)** option from the **Device usage** drop-down.
7. Click **OK**.

Your LAN port is now disabled.

To enable the Ethernet LAN port, repeat steps one through four. Select the **Use this device (enable)** check box, and click **OK**.

Setting up a wireless connection

For information on how to set up a wireless connection, refer to your wireless networking device documentation or your network administrator.

Accessing the wireless modules using your computer's system tray

The following information is for systems which have integrated wireless modules.

When using your Wi-Fi™ Mini PC module, your computer may display a Safely Remove Hardware icon in the desktop's system tray to indicate that it is in use. Do not confuse the system tray's icon with other removable PC Card devices you may have installed.

You can use the system tray's Safely Remove Hardware icon to turn off your Wi-Fi™ Mini PCI module. However, if you do so you will need to restart the computer in order to reactivate the module.

Your Wi-Fi™ Mini PCI module is integrated into your computer system. It is recommended that you do not remove the module from your computer. For assistance, contact a Toshiba Wireless Authorized Service Provider.

An overview of using the Internet

The following sections give a quick introduction to the Internet and some of its exciting features, under these headings:

- The Internet
- The World Wide Web

- Internet Service Providers
- Connecting to the Internet
- Surfing the Internet
- Internet features
- Uploading and downloading files from the Internet

The Internet

The Internet is an association of thousands of networks and millions of computers around the world connected by communications lines. They all work together to share information.

The World Wide Web

The World Wide Web (or "Web") is a subset of the Internet — a collection of interlinked documents (located on computers connected to the Internet) that work together using a specific Internet protocol called Hypertext Transfer Protocol (HTTP).

The World Wide Web offers information as text, images, audio, or video to be referenced from anywhere in the world. Special programs called Web browsers are specifically designed to work with HTTP. They make it easier to connect to a particular network address and send and receive information.

Internet Service Providers

To connect a computer directly to the Internet, many people and businesses use an Internet Service Provider (ISP). An ISP is a company that has the equipment and the telecommunication lines necessary to maintain an Internet connection.

You can connect to the Internet by using a telephone and modem or through other higher-speed communication methods such as Digital Subscriber Lines (DSL), cable, and satellite links.

Connecting to the Internet

To connect to the Internet, you need:

- A modem and telephone line, or a LAN connection
- A Web browser
- An Internet Service Provider (ISP) account

The Microsoft® Web browser Internet Explorer is automatically configured on your system so that when you first start it, it guides you through signing up for a new ISP account, or assists you in setting up your computer to work with your existing ISP.

Once you have established an ISP account, you can connect to the Internet.

1. Connect your computer's modem to a telephone line. For more information on connecting a modem, see "Connecting your modem to a telephone line" on page 83.

2. Start your Web browser. Have your modem dial the ISP's telephone number, and establish a connection with the ISP's computer.

If you are using your computer at the office, then you probably connect to the Internet through your company's network. See your network administrator about connecting to the Internet.

Surfing the Internet

Once connected to the Internet, the Web browser displays a home page, for example, your ISP's home page on the Internet or your company's Web site home page.

To visit a desired Web site, type in the Web address. The Web address, or Uniform Resource Locator (URL), is a unique identifier for that computer system linked to the Internet. Web addresses can also appear within a Web page's text, and are known

as links. Clicking a link automatically transfers your Web browser to that site.

You can also use a Search Engine, a Web site specifically designed to help you look for information.

Internet features

The Internet offers many types of communication tools to help you perform many tasks.

- Internet email

  To send and receive email of your own, you need a mailbox on the Web, or an email address.

  If you have an account with an ISP, you can probably set up an email address at the same time you sign up for the service.

- Internet chat rooms

  A chat room is a Web site that offers a place where people with similar interests and ideas communicate in real-time, one-on-one or in groups, by typing messages which are instantly viewed by others on their computer screens.

- Internet news groups

  A newsgroup is similar to a chat room, but instead of using a dedicated site to converse about a specialized subject with others in real-time, it uses a Web site as a clearinghouse where all the messages are placed, like a gigantic bulletin board.

- Online shopping

  Many Web sites offer products and services for sale.

Uploading and downloading files from the Internet

Transferring files from one computer to another is termed uploading (transferring data from your computer to a site on the Web), or downloading (transferring data from a site on the Web to your computer).

There are several ways to upload or download data. It can be as simple as attaching a file or document to an email, or you can use the File Transfer Protocol (FTP) features of your Web browser to transfer large amounts of data.

Exploring audio features

Your computer comes with Windows Media™ Player software. This provides an easy-to-use, full-featured multimedia control center.

You can use your computer to record sounds using an external microphone. You can play .wav sound files or audio CDs using the built-in speakers, headphones or external speakers.

Playing an audio CD

Insert an audio CD and close the disc tray. The CD begins to play.

If the computer is turned on, Windows Media™ Player opens and the CD begins to play. You can use the Windows Media™ Player program to control the CD.

To access the Windows Media™ Player, you can open it through the Start menu or activate it from the taskbar.

Sample Windows Media™ Player screen

The CD Player control panel works much like an ordinary compact disc player:

- To play the CD or to pause, click the **Play/pause** button on the CD Player control panel.
- To stop the CD, click the **Stop** button.

WARNING *Before using headphones to listen to an audio CD, turn the volume dial down. Playing the CD with the volume set too high could damage your ears.*

Playing CDs using Auto-Run

If you insert a CD into the CD drive and the Auto-Run feature does not automatically start your disk, try launching the CD manually. To do this, follow these steps:

1. Open the **Start** menu and select **My Computer.**
2. Click the CD/DVD drive icon.

   The disk drive will run the CD.

If your disk does not run using this method, try using an application that is associated with the media on the disk. For example, if it is a music CD, open Windows® Media Player and point it to play the CD. For other types of media, use the associated software to open the files on the disk.

Creating a CD

Your computer may come with a DVD-ROM or Multifunction drive that allows you to:

- Play pre-recorded DVDs
- Play pre-recorded CDs
- Read and write files (including music) to a CD-Recordable (CD-R) or CD-Rewritable (CD-RW) disc.

For details on how to use the software, please refer to the respective Online Help menus.

Recording sounds

You may record sounds as .wav files by connecting an external microphone or other sound source to the microphone jack.

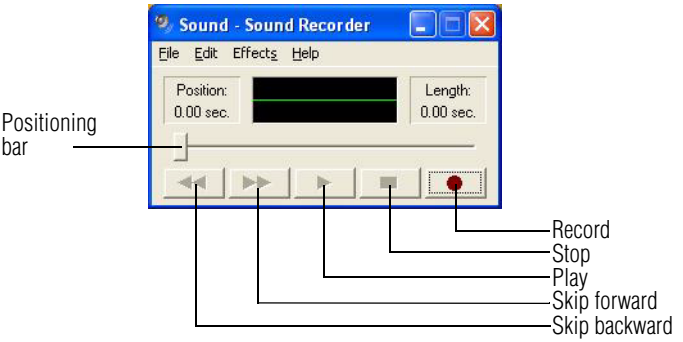
DEFINITION: A .wav (pronounced "wave") file is a Windows® format for storing sound.

TECHNICAL NOTE: If you record MP3 files, you will only be able to play them on a device capable of playing MP3 files.

Using a microphone

1 Connect an external microphone to the computer.

2 Click **Start**, point to **All Programs**, **Accessories**, **Entertainment**, then click **Sound Recorder**.



Sample Sound Recorder screen

3 Click the **Record** button.

4 Speak normally into the microphone.

5 When you've finished recording, click the **Stop** button.

The Sound Recorder window displays the new sound file as a waveform.

NOTE *You can only record 60 seconds at a time.*

6 To hear what you just recorded, click the **Play** button.

7 To save the file, select **Save** from the **File** menu.

Adjusting recording quality

The better the quality of the recording, the more disk space the sound file requires. Experiment to find a balance that fits your needs.

1. Open Sound Recorder, if necessary. (Click **Start**, point to **All Programs**, **Accessories**, **Entertainment**, then click **Sound Recorder**.)
2. In the Sound Recorder window, click **Edit**, then click **Audio Properties**.
3. In the Audio Properties dialog box, adjust the Recording Volume, Preferred device, and Preferred quality.
4. Click **OK**.

   Your new settings take effect the next time you record.

Using external speakers or headphones

Your computer is equipped with a full stereo sound system with internal speakers. Instead of using the internal speakers, you can connect headphones or a pair of external stereo speakers.

TECHNICAL NOTE: Use amplified speakers that require an external power source. Other types of speakers will be inadequate to produce sound from the computer.

To play back sound files through external speakers or headphones:

1. Locate the headphone jack on the computer.
2. Using any necessary adapters, plug the cable from the headphones or external speakers into the headphone jack.

   The headphone jack requires a 16-ohm stereo mini-jack.

To adjust the volume:

- For external speakers, use the volume controls on each speaker.
- For headphones, use the computer's volume control dial.

Chapter 7

Expansion Options

Your computer is designed to work in the office as well as on the road. This chapter explains how to set up the various optional devices so that your notebook can provide all the convenience of a traditional desktop computer.

Devices for office computing

By connecting optional devices such as an external monitor, a full-size keyboard and a mouse, you can work with your notebook as if it were a standard office computer.

You can connect any of these optional devices:

- Expansion memory modules
- Standard 101-key keyboard
- Traditional mouse or trackball
- Printer
- External monitor
- PC Cards

Some are Toshiba devices, others are standard computer components. The devices manufactured by Toshiba can be purchased through Toshiba's Web site: toshiba.com, or through the accessories information packaged with your computer.

Connecting external (optional) devices

You can connect an external PS/2 keyboard or a PS/2 mouse through the PS/2 port on the back of your computer. If you use an optional Y-cable, you can connect both a mouse and a keyboard to the port.

You can connect a serial mouse through the serial port on the back of your computer.

You can connect a USB keyboard and mouse to the USB ports on the back of your computer.

You can connect a local parallel printer through the parallel port on the back of your computer.

You can connect an external monitor through the video-out port on the back of your computer.

Using an external keyboard

If you prefer to use a full-size keyboard, you can attach one to your computer. The computer's PS/2 mouse/keyboard port supports any PS/2-compatible keyboard.

CAUTION *Make sure the computer is off before you attach the external keyboard. Connecting an external keyboard with the computer's power on can damage the external keyboard, the computer, or both.*

NOTE *If you connect a PS/2 keyboard to the computer while it is in Standby mode, you will not be able to use the keyboard when you turn the computer on.*

You can only connect one PS/2 device at a time, unless you use an optional Y-cable. Connecting a Y-cable to the PS/2 port allows you to connect a PS/2-compatible mouse and a PS/2-compatible keyboard simultaneously.

Alternatively, you can connect a USB keyboard and mouse to the USB ports.

Making your external keyboard emulate the Fn key

An external keyboard does not have the Fn key contained on the Satellite M20 computer's built-in keyboard. If you use the computer's hot keys or have set up key combinations in Fn-esse®, you'll probably miss these features when using an external keyboard. Do not worry: you can use a key combination on the external keyboard to emulate the Fn key. You can set up this key combination through the Windows Control Panel Toshiba HWSetup icon. For more information about Hardware Setup, see "Toshiba Hardware Setup" on page 176.

Using a mouse

If you prefer, you can use a mouse instead of the computer's built-in pointing device–the AccuPoint II. You can use a PS/2-compatible mouse, a serial mouse or a USB mouse.

TECHNICAL NOTE: A serial mouse disables the AccuPoint II. With a PS/2 mouse, you can choose to have the AccuPoint II active at the same time.

Connecting a serial mouse

To connect a serial mouse, connect the mouse cable to the serial port at the back of the computer. Once connected, the mouse is ready to use.

Refer to your mouse documentation for configuration information.

Connecting a USB mouse

To connect a USB mouse, connect the mouse cable to the USB port on the computer. Once connected, the mouse is ready to use.

Connecting a PS/2 mouse

CAUTION *Make sure the computer is off before you attach the mouse. Connecting a PS/2 mouse with the computer's power on can damage the mouse, the computer, or both.*

If you are connecting a mouse after you have started using the computer, begin at step 1. Otherwise proceed to step 2.

1. Click **Start**, **Turn Off Computer**, then select **Turn Off**.

   The operating system shuts off the computer.

2. Attach the PS/2 mouse cable to the PS/2 port on the computer.

HINT: Using an optional Y-cable allows you to connect a PS/2 mouse and a PS/2 keyboard to the PS/2 port simultaneously.

3. Refer to your mouse documentation for configuration information.

To use both the PS/2 mouse and the AccuPoint II, set this up when you have loaded the operating system.

Using a PS/2 mouse simultaneously with AccuPoint II

When you connect a PS/2-compatible mouse to the PS/2 port, you may use the mouse, the AccuPoint II, or both:

CAUTION *When connecting any PS/2 device, turn off your computer to prevent any possible hardware damage.*

NOTE *If you connect a PS/2 mouse to the computer while it is in Standby mode, you will not be able to use the mouse when you turn the computer on.*

1. Click **Start**, **Control Panel**, then **Printers and Other Hardware**.
2. Click the **Toshiba HWSetup** icon.
3. Select the **Pointing Devices** tab.
4. Under Pointing Devices Options, select one:
   - Auto-selected — configures the PS/2 mouse to work when it is connected at power on, or the AccuPoint II to work otherwise. Auto-selected is normally the default option.
   - Simultaneous — configures both the AccuPoint II mouse and PS/2 mouse to work with the computer at the same time. You must reboot the computer for the settings to take effect.

HINT: When Auto-selected is the default, the computer can not detect a PS/2 mouse if you connect it after booting the computer.

This can be changed in Toshiba Hardware Setup.

5. Click **OK**.

A message appears stating "The changes will take effect next time the machine is rebooted. Reboot the machine now?"

6 Click **Yes**.

The computer reboots, and the PS/2 mouse is activated.

Using a printer

NOTE *Read the documentation that came with your printer. Follow the manufacturer's instructions when connecting a printer.*

NOTE *You must supply the proper printer cable. If one did not come with your printer, you may purchase one from an electronics or computer store.*

If your printer is ECP- or IEEE-compliant, make sure your printer cable is an IEEE 1284 cable.

CAUTION *Your printer documentation may require you to install the printer software before physically connecting the printer to your computer. If you do not install the software as instructed by the printer manufacturer, the printer may not function correctly.*

CAUTION *Never connect the printer cable while the computer's power is on. Doing so may damage the printer, the computer, or both.*

You must determine whether it requires a parallel, serial, infrared, or a USB interface before you can connect a printer. Check the printer's documentation.

You also need a suitable printer cable, which may have been provided with your printer. If not, your company may keep a stock of cables. Otherwise, you can purchase one from a computer or electronics store.

Connecting a parallel printer

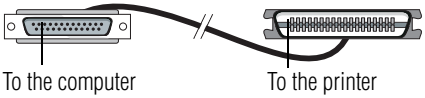
These instructions assume you have a parallel printer.

1 Turn off your computer.

   If the computer is connected to an AC power source, disconnect the AC adapter.

CAUTION *Never connect the printer cable while the computer is on. Doing so may damage the printer, the computer, or both.*

2 Connect the printer cable to the printer and to the computer's parallel port. Use the printer cable illustration as a connection guide.



Identifying the ends of a parallel printer cable

3 Plug the printer's power cable into a live electrical outlet.

4 See your printer documentation for additional configuration steps.

For more information on getting your printer to print, see "Printing your work" on page 97.

Setting up your printer

Setting up a printer involves selecting a printer driver. This special program acts as a translator that turns your document into a form the printer can understand.

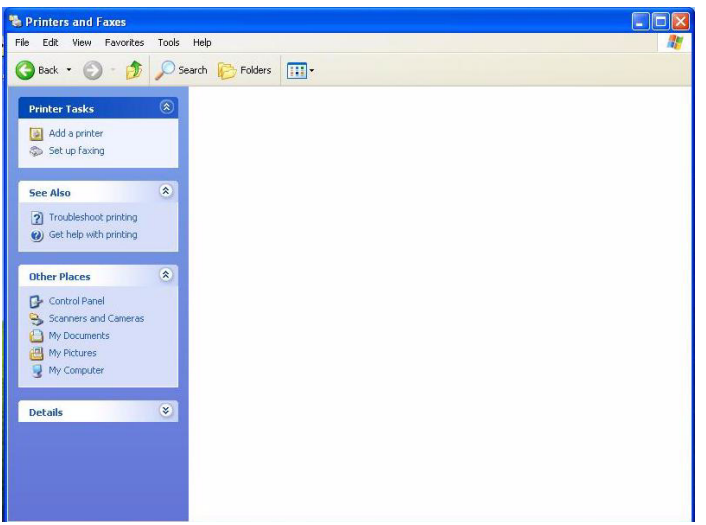
If you are using any non-Windows® programs, set up a printer driver for each of those programs. Refer to your program's documentation for more information.

TECHNICAL NOTE: If you have the manufacturer's disk that came with your printer, you can use it to install the printer on your computer. The manufacturer's disk may include additional drivers and fonts.

To set up a printer with the Add Printer Wizard:

1 Click **Start**, and click **Printers and Faxes**.

The operating system opens a Printers and Faxes window.



Sample Printers and Faxes window

2 Click **Add Printer**.

The Add Printer Wizard appears.

Add Printer Wizard
Welcome to the Add Printer Wizard
This wizard helps you install a printer or make printer connections.
If you have a Plug and Play printer that connects through a USB port (or any other hot pluggable port, such as IEEE 1394, infrared, and so on), you do not need to use this wizard. Click Cancel to close the wizard, and then plug the printer's cable into your computer or point the printer toward your computer's infrared port, and turn the printer on. Windows will automatically install the printer for you.
To continue, click Next.
< Back
Next >
Cancel

Sample Add Printer Wizard dialog box

3 Click **Next**.

The Add Printer Wizard asks you to select your printer.

TECHNICAL NOTE: If your printer is Plug and Play, the Windows® XP operating system recognizes it automatically. You can ignore the remainder of this section. See your printer manual.

4 If the printer you are setting up:

- Is not connected to a network, select **Local printer attached to this computer**.
- Is connected to a network, select **Network printer, or a printer attached to another computer**.

5 Click **Next**.

The Add Printer Wizard looks for a Plug and Play printer. If it does not locate one, click **Next**.

The Add Printer Wizard prompts you for the printer port.

6 Select the port settings according to the instructions in your printer's documentation and the port to which your printer is connected, then click **Next**.

The wizard prompts you to select your printer.

7 From the list of manufacturers and printers, select your printer, then click **Next**.

The Add Printer Wizard prompts you to enter a "friendly" printer name.

8 Enter a name for your printer.

HINT: If you are using more than one printer, make sure the name is descriptive enough to help you tell the difference.

9 If you want this printer to be:

- The default printer, click **Yes**.
- Available when specifically requested, click **No**.

10 Click **Next**.

11 Click **Finish**.

The Windows® XP operating system prints a test page.

12 To complete the setup, click **OK**.

You are now ready to print.

Depending on your program, you may see various messages indicating the status of your print job.

For more information on getting your printer to print, see "Printing your work" on page 97.

TECHNICAL NOTE: Some printers require a specific installation process. In this case, the Windows® XP operating system Add Printer Wizard will display an error message. If this happens, refer to your printer installation guide for further instructions.

Using an external monitor

Your computer comes with a built-in LCD display, but you can also connect other external display devices to one of two available video ports:

- A television via the video-out port.
- A video display device, such as a video projection unit, via the video-out port.
- An external SVGA monitor via the RGB (monitor) port.

Before connecting your television, video projector, monitor or other display device, configure your computer for the type of device you're connecting. To do this, refer to your operating system documentation.

Connecting the display device

If you're connecting a television or other video display device to the computer's video-out port, refer to the following section for guidelines on choosing a video cable, then refer to "Connecting a device to the video-out port" on page 160.

If you're connecting an SVGA monitor, skip to "Connecting an external monitor" on page 161.

Selecting video cables

To connect a device to the video-out port, you need to purchase a video cable (not included with your system). For the best video quality, always use a properly shielded cable.

HINT: Toshiba recommends using a cable no longer than 20 feet (approximately 6 meters).

Using a poor quality cable may result in a dull or fuzzy picture, poor color, ghosting, video noise, or loss of video.

Connecting a device to the video-out port

NOTE *Video cables are not included with your computer. To connect a device to the video-out port, you'll need to purchase a composite video cable.*

1. Connect one end of the video cable to the external video device.

   Refer to the documentation provided with the device for the location of its television signal-in jack.

2. Connect the other end of the video cable to the video-out port on the computer.
3. Connect the external device's power cable to a live electrical outlet.
4. Turn on the external video device.
5. Set the display mode by pressing Fn + F5, or by changing the Display Properties settings. For more information, see

"Directing the display output when you turn on the computer" on page 161.

TECHNICAL NOTE: If you are connecting to a television, you may need to change the display properties. Most televisions use or support an 800 x 600 standard resolution.

Connecting an external monitor

You can easily attach an external monitor to your computer if you need a larger screen. To do this:

1. Connect the video cable to the video-out port on the computer.
2. Connect the monitor's power cable to a live electrical outlet.
3. Turn on the external monitor.
4. Set the display mode by pressing Fn + F5, or by changing the Display Properties settings. For more information, see the next section.

Directing the display output when you turn on the computer

Once you've connected an external display device, you can choose to use the built-in display panel only, the external device only, or both simultaneously. The quickest way to change the display output settings is to use the display hot key (Fn + F5):

1. Press Fn and F5 simultaneously.

   This will display the following window.

Sample display options window

2 While holding down Fn, press F5 repeatedly until the desired one is highlighted:

- Built-in display only
- Built-in display and external monitor simultaneously
- External monitor only
- Built-in display and TV (or other external video device) simultaneously (only when in dual controller mode)
- TV (or other external video device) only

3 Release the Fn and F5 key to select the desired setting.

TECHNICAL NOTE: You can also change these settings using the Display Properties Box.

Set the option for the video controller by clicking Start, then Control Panel and clicking Display. Choose the Settings tab, click the Advanced button, select Display Device, select the applicable Monitor type, click Apply or OK.

For more information on switching the display output, see "Display modes" on page 219.

Adjusting the quality of the external display

To obtain the best picture quality from your television (or other video display device), you may need to adjust the video settings. See the video device documentation for additional configuration steps.

TECHNICAL NOTE: In order to use one of the simultaneous modes, you must set the resolution of the internal display panel to match the resolution of the external display device. The external display device must support a resolution of 640 X 480 or higher.

Video limitations

Keep in mind that the quality of the display will be limited to the capabilities of the external video device.

- If the external video device, such as an SVGA monitor, is capable of displaying at a maximum resolution of 640 x 480 and your system is set for a higher resolution, only part of the desktop will appear on the screen. You can view the "lost" area by scrolling to it.
- Since most televisions and video projectors overscan by 15 to 20 percent, some of the desktop will be outside the viewing area. You can view the edge of the desktop by scrolling to it.
- If you use the display hot key (Fn + F5) to change the display output with the LCD Display Stretch option enabled and the display area (resolution) set to 640 x 480 or 800 x 600, the image on the internal display panel may appear stretched.

Using the Wi-Fi™ Mini PCI module

Your computer may have an integrated Wi-Fi Mini PCI module. It is recommended that you do not remove the module from your computer. For assistance, contact a Toshiba Wireless Authorized Service Partner.

Accessing the Wi-Fi™ Mini PCI module

When using your Wi-Fi Mini PCI module, your computer may display a Safely Remove Hardware icon in the desktop's system tray to indicate that it is in use. Do not confuse the system tray's icon with other removable PC Card devices you may have installed.

You *can* use the system tray's Safely Remove Hardware icon to turn off your Wi-Fi Mini PCI module. You will need to restart your computer to turn it back on. To avoid restarting your computer, you can alternatively use the Wi-Fi on/off antenna switch.

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Chapter 8

Toshiba Utilities

Your computer includes several utilities designed to help you to reconfigure your system to best meet your individual needs. Together, these allow you to determine certain system details, set additional options or change default options. This chapter describes the utilities supplied by Toshiba:

- Fn-esse
- Hotkey utility
- Toshiba Console
- Toshiba Hardware Setup
- Toshiba Power Saver utility
- Enabling Hibernation
- Setting user passwords
- Using a supervisor password

Fn-esse

Desktop shortcuts and Toshiba's Fn-esse program provide quick ways to open programs, documents, and folders from within any Windows® program without using the Start menu. For more information on creating desktop shortcuts, refer to the operating system documentation that came with your computer.

This section describes how to use the Fn-esse program to quickly access your programs and files.

With Fn-esse, you can assign an Fn key combination to:

- Open a Windows® XP operating system program.
- Open a file in its associated program.
- Display a customized folder of programs and/or files from which to choose.

Fn-esse also has several keys, known as hot keys, that perform preassigned operations. For more information, see "Hot Keys" on page 215.

You can assign any key that is not associated with a hot key or a keyboard overlay.

Starting Fn-esse

1. Click **Start**, point to **All Programs**, **Toshiba Utilities**, then click **Fn-esse**.

   The Fn-esse keyboard appears.

Sample Fn-esse window

The keys are color-coded as follows:

- Available keys are dark gray with white letters
- Assigned keys and keys associated with a popup list are shown on the Fn-esse keyboard in the selected color
- Unavailable keys are light gray.

There are two ways to assign a key to open a program or document:

- Using drag-and-drop
- Using the keyboard or pointing device

The method most often used is drag-and-drop.

Using drag-and-drop to assign a key

To assign a key to a program or document:

1. Start both Fn-esse and Windows® Explorer (or the program supporting drag-and-drop).
2. Resize the Explorer window so that you can see both the Fn-esse keyboard and Explorer at the same time.
3. In the Explorer window, highlight the program or document file you wish to assign to a key.
4. Click and hold the primary button as you drag the highlighted item from Explorer to the key on the Fn-esse keyboard to which you want to assign it.

5 Release the primary button.

Fn-esse displays the Add/Edit Command dialog box with the Description, Command Line and Working Directory fields automatically completed.

6 Click **OK** to close the Add/Edit Command dialog box with your key assignment in place.

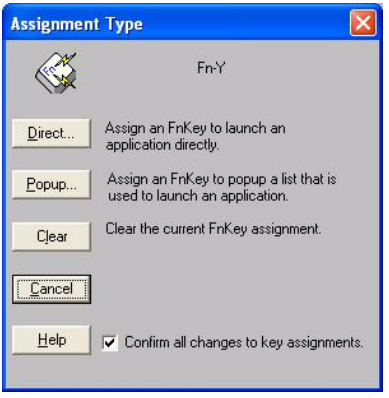
The program or document is now associated with the key you just selected. To open the program or document, press Fn plus the appropriate key from within any Windows® program.

Using the keyboard or pointing device to assign keys

To assign a key to open a program or document, start Fn-esse and either:

- Using the keyboard, press and hold the Fn key, then press the desired assignment key.
- Using the pointing device, move the cursor over the desired key in the Fn-esse window and press the secondary button.

The Assignment Type dialog box appears.



Sample Fn-esse assignment type dialog box

Making a direct key assignment

1. Select **Direct...** to display the Add/Edit Command dialog box.
2. Enter the Description, Command Line and Working Directory for the new Fn-esse key assignment, or click the **Browse** button to specify this information.
3. Click **OK**.

Making a popup assignment

1. Select **Popup...** to display the Application Explorer dialog box.
2. Select the desired folder. The left side of the Application Explorer window displays the folders in the Programs menu. The right side lists the programs and documents in the folder. These are the items that will appear in the popup list.
3. To create a popup list with items from various folders, or to pick only a few items from a folder, create a new folder containing only the desired programs and documents. If you are unsure how to do this, refer to your Windows® XP operating system documentation.
4. Click **OK** to associate the folder with the key you just selected.

   To open a popup list showing the items in that folder, press Fn plus the appropriate key from within any Windows® program.

Viewing existing key assignments

To view the existing key assignments, choose **Assignments** from the Fn-esse keyboard. Fn-esse displays the Function Key Assignments dialog box. This box lists all the key assignments and the program or document to which each key is assigned.

To view items in a popup list, click the **Expand popup lists** check box.

Changing or removing existing key assignments

In the Fn-esse keyboard, click the key you wish to change with the secondary button.

Fn-esse displays the Assignment Type dialog box.

- To change the key assignment, click **Direct...** or **Popup...** and continue as if you were creating a new assignment.
- To remove the key assignment, click **Clear**.

Hotkey utility

The hotkey utility allows you to receive a confirmation message when you use the hotkey combination for Standby [Fn+F3] or Hibernation [Fn+F4].

To activate:

1. Click **Start**, **All Programs**, **Toshiba Utilities**, then click the Hotkey utility.
2. The Hotkey window appears.

Toshiba Hotkey
Display a Standby confirmation message if Fn+F3 is pushed.
Display a Hibernation confirmation message if Fn+F4 is pushed.
OK
Cancel

Sample Toshiba Hotkey utility window

3 Put a check mark next to the desired option.

4 Click **OK**.

Toshiba Console

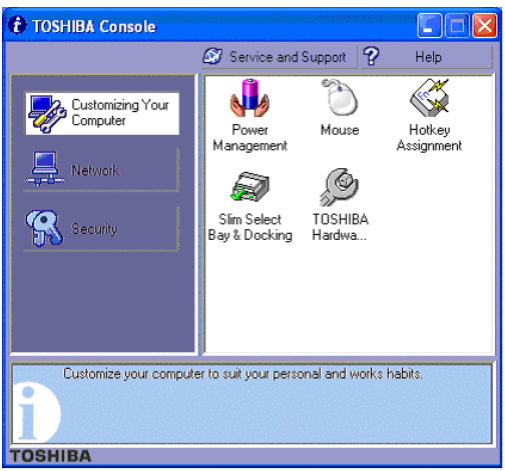
The Toshiba Console provides quick access to computer functions and allows you to customize a range of computer settings.

To access the control panel:

1 Click **Start**, then click **All Programs**.

2 Point to **Toshiba Console**, then click the resulting **Toshiba Console** selection.

The Toshiba Console window appears.



Sample Toshiba Console window

The Toshiba Console offers three categories of features:

- Customizing Your Computer
- Network
- Security

Customizing Your Computer

The features available in this category are:

- Power Management
- Mouse
- Hotkey assignment (for detailed information, see "Fn-esse" on page 166)
- Slim SelectBay & Docking
- Toshiba Hardware

Network

The features in this category are:

- IR Utility

Security

The features available in this category are:

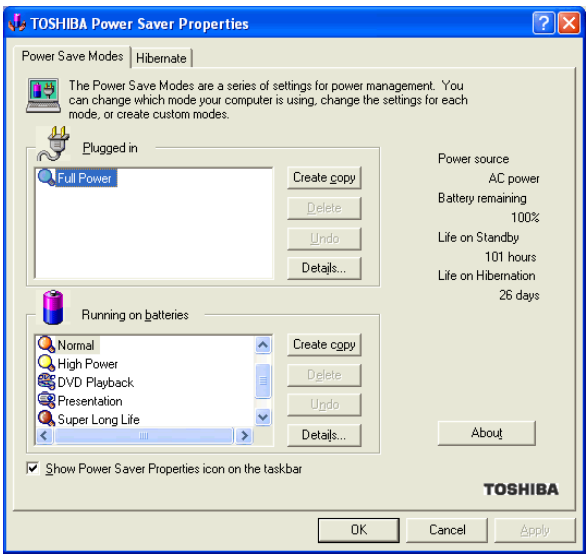
- Supervisor password
- User password

Power Management

The Power Management feature enables you to control your computer's power usage, regardless of the source, and use the many preset power modes, or create one yourself.

To access Power Management through the Toshiba Console, double-click the **Power Management** icon.

The Toshiba Power Saver Properties window appears.



Sample Toshiba Power Saver Properties window

The Power Save Modes tab shows the power usage modes for both AC power ("Plugged in") and battery power (Running on batteries").

You can either use one of the preset modes or create and use your own customized mode. The preset modes cannot be deleted.

By changing the options that appear in the Toshiba Power Saver Properties window and clicking **OK**, you can reconfigure that function. Any options that you change become effective when you click either **OK** or **Apply**.

Plugged in section

This section has a single preset power usage mode — Full Power. You can create other AC power modes, but Toshiba recommends use of the preset Full Power mode.

The windows and settings for creating and customizing AC power modes are described below.

Running on batteries section

This section lists the preset modes along with the estimated battery life for each mode. The preset modes are:

- Long Life
- Normal
- High Power
- DVD Playback
- Presentation
- Super Long Life

Although you can change the properties for any of these modes, this is not recommended. If you need a customized mode, create a new mode with the properties you require.

The DVD Playback mode applies only when a DVD viewing program is playing.

Creating a new power mode

1. Highlight one of the preset modes.
2. Click **Create copy**.
3. A new mode appears with the title "Copy *Name*" where *Name* is the title of the mode you copied. Delete this title, type in the name for your new power mode, then press Enter.

Customizing a power mode

1. Highlight the mode on the Power Save Modes window.
2. Click **Details...**.

The Properties window for the selected mode opens with the General tab displayed.

This tab enables you to choose an icon for your power usage mode, describe the mode's characteristics and, optionally, associate it with a program.

The Name field displays the name assigned to the mode in the Power Saver Properties window. You can change the name here if you wish.

Slim SelectBay™

This utility allows you to remove or install a Slim SelectBay device while your computer is on or hibernating.

Slim SelectBay™ Service

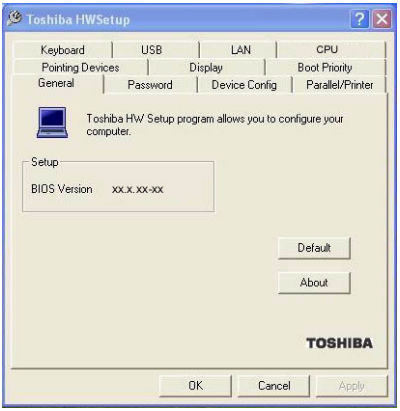
- Hot Dock/Undock Support—this service allows the Slim SelectBay device to be removed without turning off the computer
- Warm Dock/Undock Support—this service allows the Slim SelectBay device to be removed while the computer is in Standby or Hibernate modes

Toshiba Hardware Setup

Toshiba Hardware Setup is the Toshiba configuration management tool available through Windows. To access it:

1. Click **Start**, **Control Panel**, then **Printers and Other Hardware.**
2. Click **Toshiba HWSetup**.

   The Toshiba HWSetup windows displays.



Sample Toshiba HWSetup window

The tabs represent various dialog boxes. They are:

- General—Allows you to view current BIOS, hard disk drive and memory settings
- Password — Allows you to set the user password and an owner string
- Device Config — Shows the Device configuration options
- Parallel/Printer — Allows you to configure the parallel port default settings
- Pointing Devices — Allows you to use both the AccuPoint II and external pointing devices together or to have the system auto-select one
- Display — Allows you to change various default settings for the built-in LCD display
- Boot Priority—Allows you to change the sequence in which your computer searches the drives for the operating system.
- Keyboard — Allows you to configure an external keyboard to emulate the Fn function key
- USB — Allows you to enable or disable USB Legacy Emulation

- LAN—Allows you to set networking functions
- CPU — You can set the CPU Frequency Mode as:

  Dynamically Switchable. This mode is the default setting for you computer, and automatically changes the processing frequency and decrease voltage depending on the power source:

  - AC Power — If your computer is connected to the AC adapter, the CPU frequency mode is set to high for faster processing
  - Battery Power — If your computer is running on battery power, the CPU frequency mode is set to low, for slower processing. Switching the CPU to low allows you to conserve power and extend the operating time of you battery

  Always High. Sets the CPU speed to high when using either the AC adapter or the battery.

  Always Low. Sets the CPU speed to low when using either the AC adapter or the battery.

By changing any of the options that appear in the dialog boxes and clicking **Apply**, you can reconfigure that function. Any options that you change will become default settings when you restart your system.

Toshiba Power Saver utility

Toshiba's Power Saver utility enhances your computer's power management capabilities. It controls the computer's Power Save Mode, which is a series of settings for power management. In the Power Save Properties dialog, you can choose which mode to use, change settings for each mode, or create your own mode.

To access Power Saver Properties:

1. Click **Start**, **Control Panel**, then **Performance and Maintenance**.

2. Click the **Toshiba Power Saver** icon.

By changing the options that appear in the Power Saver Properties dialog box and clicking **OK**, you can reconfigure that function.

You may choose a power-saving management strategy to best suit your computing needs. If you are running on batteries and the programs that you are using do not require a lot of system resources, you may experience longer work sessions by enabling the Normal or Long Life settings.

Any options that you change become effective when you click either **OK** or **Apply**.

Enabling Hibernation

Your computer includes a Toshiba Power Saver utility that allows you to change many of your default power settings. You can enable hibernation through this utility.

To power down the computer using the Hibernation option, click **Start**, select **Turn Off Computer**. When you hold down the Shift key, the Standby button changes to Hibernate. Hold down the **Shift** key, then select **Hibernate**.

The computer saves the state of the system, including all open programs and files, to the hard disk, and then powers down completely.

TECHNICAL NOTE: Toshiba recommends that you always have the Hibernation option enabled. Hibernation is the function that causes your system to save anything you have in short-term memory to the hard disk drive should your battery fail. If Hibernation is not enabled and your battery dies, you will lose data.

Setting user passwords

Setting a password leaves your computer secure so that nobody can access your files. You must enter the password before you can work on your computer.

Toshiba supports the several types of passwords on your computer:

- An instant password — Secures your open programs and files when you temporarily leave the computer.
- A power-on password — Prevents unauthorized users from starting or restarting the computer
- A hard disk drive password — Prevents access to the hard disk even if it is removed and installed in another computer

- A supervisor password — Prohibits unauthorized users from accessing certain functions such as Toshiba Hardware Setup. This is useful if more than one person uses the computer

A single user password supports the instant and power-on password functions.

Using an instant password

An instant password secures your system with a single keystroke. Use this feature when you leave your desk for a few minutes and do not want to turn off the computer.

To use an instant password, press Fn, then press F1. This freezes the keyboard and AccuPoint II and blanks the screen. An instant password has no effect on an optional serial mouse or trackball.

1. To unlock your system:
   - If you have not registered a user password, press Enter.
   - If you have registered a user password, press Enter. Type your password then press Enter.

   If you enter the password correctly, the computer returns to where it was when you enabled the instant password.

Setting a user password

To register a password for the instant and power-on password functions:

1. Click **Start**, **Control Panel**, then **Printers and Other Hardware**.
2. Click **Toshiba HWSetup**.
3. Select the **Password** tab.
4. Click **Registered**.
5. Type your password in the Enter Password box and click **OK**.

6 Type the password again in the Verify Password box and click **OK**.

7 Click **Exit**.

Disabling a user password

To cancel the password that supports the instant and power-on password functions:

1 Click **Start**, **Control Panel**, then **Printers and Other Hardware**.

2 Click **Toshiba HWSetup**.

3 Select the **Password** tab.

4 Click **Not Registered**.

5 Type your password in the Enter Password box and click **OK**.

TECHNICAL NOTE: You have three tries to enter the correct password. After an incorrect try, an "Incorrect Password" dialog box will appear. Click OK *to reenter the password.*

After three incorrect tries, this message appears: "Sorry, access denied! Reboot is required to regain acce ss." You will need to turn off the computer, then reboot.

6 Click **Exit**.

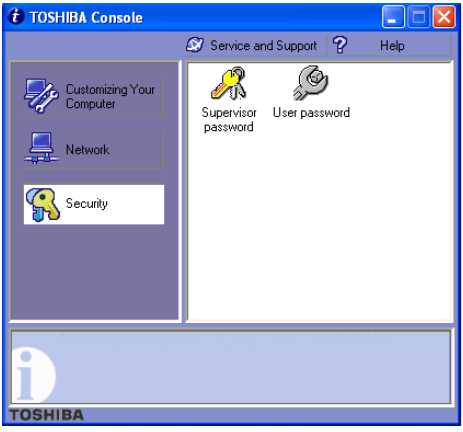
Using a supervisor password

A supervisor password prevents other users from changing hardware configuration options.

Setting a supervisor password

1. Click **Start**, then click **All Programs**.
2. Point to **Toshiba Console**, then click the resulting **Toshiba Console** selection.

   The Toshiba Console window appears.
3. Select **Security**.



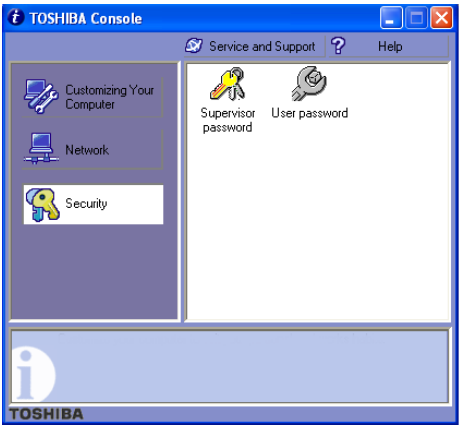
Sample Toshiba Console Security window

4. Click the **Supervisor password** icon.
5. Select **Registered**.
6. Enter a password (then enter it again to verify).
7. Click **OK**.

Deleting a supervisor password

1. Click **Start**, then click **All Programs**.
2. Point to **Toshiba Console**, then click the resulting **Toshiba Console** selection.

   The Toshiba Console window appears.
3. Select **Security**.



Sample Toshiba Console Security window

4. Click the **Supervisor password** icon.
5. Select **Not Registered**.
6. Enter the correct password.
7. Click **OK**, then click **OK** again to exit.

Chapter 9

If Something Goes Wrong

Some problems you may encounter when using your notebook computer are relatively easy to identify and solve. Others may require help from your dealer or the manufacturer of a software program.

This chapter aims to help you solve many problems by yourself. It covers the problems you are most likely to encounter.

If all else fails, contact Toshiba. You will find information on Toshiba's support services at the end of this chapter.

Problems that are easy to fix

Your program stops responding.

If you are working with a program that suddenly freezes all operations, chances are the program has stopped responding. You can exit the failed program without shutting down the operating system or closing other programs.

To close a program that has stopped responding:

1 Press Ctrl, Alt, and Del simultaneously (once).

The Windows Task Manager window appears.

2 Click the **Applications** tab.

If a program has stopped responding, the words "not responding" appear beside its name in the list.

3 Select the program you want to close, then click **End Task**.

Closing the failed program should allow you to continue working. If it does not, continue with step 4.

4 Close the remaining programs one by one by selecting the program name, then **End Task**.

5 Click **Start**, **Turn off computer**.

6 The Turn off computer window appears.

7 Click **Turn off**.

The computer turns off.

Your program performs an illegal operation.

If you receive the message, "Your program has performed an illegal operation," you should record the details of the message and consult the software manufacturer.

To record the details:

1 Click the **Details** button and select the text the operating system displays.

The Details button displays information that the software manufacturer needs to help you solve your problem.

2 Press Ctrl and c simultaneously to copy the text to the clipboard.

3 Open Notepad (click **Start**, point to **All Programs**, then point to **Accessories** and click **Notepad**).

4 Press Ctrl and v simultaneously to paste the details into Notepad.

5 Add a paragraph break and type some notes describing what you were doing when you received the message.

6 Save the file and refer to it when you contact the software manufacturer.

Problems when you turn on the computer

These problems may occur when you turn on the power.

The computer will not start.

Make sure you attached the AC adapter and power cable properly or installed a charged battery.

Press and hold down the power button for a few seconds.

If you are using the AC adapter, check that the wall outlet is working by plugging in another device, such as a lamp.

The computer starts but, when you press a key, nothing happens.

You are probably in Stand By mode and have a software or resource conflict. When this happens, turning the power on returns you to the problem instead of restarting the system. To clear the condition, press Ctrl, Alt, and Del simultaneously.

Clearing the condition may get the computer running, but it will not solve a resource conflict. Read the documentation that came with the conflicting device and "Resolving a hardware conflict" on page 191.

The computer is not accessing the hard disk or the external diskette drive.

Your computer normally loads the operating system from the hard disk. If you have a hard disk problem, you will not be able to start the computer. Insert a system diskette into the external diskette drive and press the left or right arrow key and choose your boot-up device.

The computer displays the WARNING RESUME FAILURE **message.**

The computer was placed in Stand By mode and the battery has discharged. Data stored in the computer's memory has been lost.

To charge the battery, leave the computer plugged into a live wall outlet for several hours. For more information, see "Power and the batteries" on page 195.

The computer displays the Non-System disk **or** disk error **message.**

Make sure there is no diskette in the diskette drive. If there is a diskette in the drive, remove it and press any key to continue. If pressing any key does not work, press Ctrl, Alt, and Del to restart the computer.

The Windows® operating system is not working

Once you are familiar with the desktop and used to the way the operating system responds to your work routine, you can easily detect if the operating system is not working correctly. For example:

- The operating system fails to start after the Starting Windows XP message appears.
- The operating system takes a long time to start.
- The operating system responds differently from the normal routine.
- The screen does not look right.

Unless a hardware device has failed, problems usually occur when you change the system in some way such as installing a new program or adding a device.

If you experience any of these problems, use the options in the Startup menu to fix the problem.

Using Startup options to fix problems

If the operating system fails to start properly, you may have to change your system's configuration or verify the startup procedure to fix the problem. To do this, use the options in the Startup menu. This section describes each option and when to use the procedure.

To open the Startup menu:

1. Restart your computer.
2. Press F8 when your computer starts.

   The Windows® Advanced Options menu displays these options:

   - Safe Mode
   - Safe Mode (with Networking)
   - Safe Mode (with Command Prompt)
   - Enable Boot Logging
   - Enable VGA Mode
   - Last known good configuration (your most recent settings that worked)
   - Directory Services Restore Mode (Windows® domain controllers only)
   - Debugging Mode
   - Start Windows® normally
   - Reboot
   - Return to OS Choices (menu)

See your Windows® documentation for further explanation.

TECHNICAL NOTE: If your computer is connected to a network, the Startup menu may display different versions of Safe mode.

Internet problems

My Internet connection is very slow.

Many factors contribute to the speed with which you can surf the Internet. They include: modem speed, time of day (when everyone else is surfing, your access can be slow) and popularity of the site. If accessing a particular site is very slow, try later.

My browser can not find the URL address I typed in.

Make sure you separated the domain names of the address with the forward slash (/). Check the spelling of each name and the syntax of the address carefully. A single incorrect letter or missed character, comma instead of period ("dot") or other mistake makes it impossible for your browser to locate the site.

My browser can not find a site I bookmarked.

The World Wide Web is constantly changing. A site you bookmarked yesterday may not be available today or its server may be down for temporary repair. Try again later.

The Windows® XP operating system can help you

If the operating system has started properly, but you still have a problem using your computer, the online Help can assist you in troubleshooting the problem.

To access Windows® XP Help and Support:

1 Click **Start**, then click **Help and Support**.

The Help and Support window appears.

2 Then do one or both of the following:

- In the search field, type in the topic of the problem with which you need help and follow the on-screen instructions.
- Click a problem you would like help with from the listings and follow the on-screen instructions.

You can connect to Support Online by clicking **Support** from the menu.

Resolving a hardware conflict

If you receive an error message telling you there is a device driver conflict or a general hardware problem, try using Windows® Help and Support to troubleshoot the problem first.

For help on hardware conflicts:

1 Click Start, then click **Help and Support**.

2 Click the **Hardware** link in the window's left pane.

A list of category links appear.

3 Click the **Fixing a hardware problem**.

4 Choose from specific topics and follow the steps.

If there is still a problem, the operating system should display a message that explains what the conflict is.

A plan of action

The smooth operation of the system depends on the interaction of all devices, programs, and features. If the system or one of its attached devices isn't working, resolving the problem can be time-consuming and frustrating.

The recommended procedure for getting multiple devices to work together is to add and set up one device at a time. After you add

each device, test it to make sure it and all previously connected devices work.

The device most recently connected to the system is the one most likely to be causing a hardware conflict.

Resolving hardware conflicts on your own

Computer components need resources to accomplish a task. A device, such as a disk drive or a modem, needs a channel to the computer's Central Processing Unit (CPU). It also needs a direct channel to the computer's memory to store information as it works. These channels of communication are commonly referred to as system resources.

Interrupt Request Channel

The channel to the CPU is called an Interrupt Request (IRQ) because it interrupts what the processor is doing and requests some of the processor's time. If two or more devices use the same IRQ, the processor does not know which device is asking for attention. This causes a hardware conflict.

Direct Memory Access

Similarly, the data required by the device is stored in a specific place or address in memory called the Direct Memory Access (DMA). The DMA provides a dedicated channel for adapter cards to bypass the microprocessor and access memory directly. If two or more devices use the same DMA, the data required by one device overwrites the data required by the other, causing a hardware conflict.

Resolving conflicts

There are three things you can do to resolve hardware conflicts:

- Disable the device.

For an older device, remove it from the computer.

- Disable another system component and use its resources for the new device, see "Fixing a problem with Device Manager" on page 193.
- Reconfigure the device so that its requirements do not conflict. Refer to the device's documentation for instructions about changing settings on the device.

Fixing a problem with Device Manager

Device Manager provides a way to check and change the configuration of a device.

CAUTION *Changing the default settings using Device Manager can cause other conflicts that make one or more devices unusable. Device Manager is a configuration tool for advanced users who understand configuration parameters and the ramifications of changing them.*

Disabling a device

1. Click **Start**, **Control Panel**, then **Performance and Maintenance.**
2. Click **Administrative Tools**.
3. Click the **Computer Management** icon.
4. Click **Device Manager** in the left frame.
5. Select the specific device from the device category.
6. In the toolbar, look to the far right for an icon of a monitor with a strike mark through a circle on the front. This is the disable feature.
7. Click the icon.

   You are given the option of disabling the device.

8 Click **yes** or **no**, whichever is appropriate.

Checking device properties

Device Manager provides a way to view the properties of a device. Properties include the name of the manufacturer, the type of device, the drivers installed, and the system resources assigned to the device.

To check a device's properties:

1 Click **Start**, **Control Panel**, then **Performance and Maintenance.**

2 Click **Administrative Tools**.

3 Click the **Computer Management** icon.

4 Click the **Device Manager** button.

5 To view the device(s) installed, double-click the device type.

6 To view the properties, double-click the device.

The operating system displays the Device Properties dialog box, which provides an array of tabs. They include:

- The **General** tab, which provides basic information about the device.

A Troubleshooting button is also present.

Click **troubleshooting.**

A Help and Support window for that device appears.

For more information about Device Manager, refer to Windows® XP online help.

- The **Resource** tab, which lists resources assigned to the monitor, DVD-ROM, Multifunction drive, diskette disk drive, and other power-using functions.
- The **Drivers** tab, which displays the drivers being used by the device.

Memory problems

Incorrectly connected or faulty memory modules may cause errors that seem to be device-related. It is worthwhile checking for these first:

1. Click **Start**, then click **Turn Off Computer**.
2. Click **Turn Off**.

   The operating system shuts down and turns off the computer automatically.
3. Remove the memory module.
4. Reinstall the memory module, following the instructions in "Adding memory" on page 71, and making sure it is seated properly.
5. Check for the error again.
6. If the error recurs, remove the memory module entirely and check for the error again.

   If removing the memory module eliminates the error, the memory module may be faulty. If the error recurs without the memory module installed, the error is not caused by the memory module.

Power and the batteries

Your computer receives its power through the AC adapter and power cable or from the system batteries (main battery and real-time clock (RTC) battery). Power problems are interrelated. For example, a faulty AC adapter or power cable will neither power the computer nor recharge the batteries.

Here are some typical problems and how to solve them:

The AC power light does not come on when you plug in the AC adapter and power cable.

Make sure the AC adapter and power cable are firmly plugged into both the wall outlet and the computer.

If the AC power light still does not come on, check that the wall outlet is working properly by plugging in a lamp or other appliance.

The AC adapter and power cable work correctly, but the battery will not charge.

The battery doesn't charge while the computer is consuming full power. Try turning off the computer.

The main battery may not be inserted correctly in the computer. Turn off the computer, remove the battery, clean the contacts with a soft dry cloth (if necessary) and replace the battery.

The battery may be too hot or too cold to charge properly. If you think this is the probable cause, let the battery reach room temperature and try again.

If the battery has completely discharged, it will not begin charging immediately. Leave the AC adapter and power cable connected, wait 20 minutes and see if the battery is charging.

If the battery light is glowing after 20 minutes, let the computer continue charging the battery for at least another 20 minutes before you turn on the computer.

If the battery light does not glow after 20 minutes, the battery may have reached the end of its useful life. Try replacing it.

The battery appears not to power the computer for as long as it usually does.

If you frequently recharge a partially charged battery, it may not charge fully. Let the battery discharge completely, then try charging it again.

Check the power options using the Power Management utility. Have you added a device, such as a PC Card or memory module, that takes its power from the battery? Is your software using the hard disk more? Is the display power set to turn off automatically? Was the battery fully charged to begin with? All these conditions affect how long the charge lasts.

Keyboard problems

If, when you type, strange things happen or nothing happens, the problem may be related to the keyboard itself.

The keyboard produces unexpected characters.

A keypad overlay may be on. If the numeric keypad or cursor control light is on, press Fn and F10 simultaneously to turn off the cursor control light or press Fn and F11 simultaneously to turn off the numeric keypad light.

If the problem occurs when both the keypad overlays are off, make sure the software you are using is not remapping the keyboard. Refer to the software's documentation and check that the program does not assign different meanings to any of the keys.

You have connected an external keyboard and the operating system displays one or more keyboard error messages.

If you have a second keyboard, try it. If it works, the first keyboard may be defective or incompatible with your computer.

Display problems

Here are some typical display problems and their solutions:

The display is blank.

Display Auto Off may have gone into effect. Press any key to activate the screen.

You may have activated the instant password feature by pressing Fn and F1 simultaneously. If you have registered a password, press

the Enter key, type the password and press Enter. If no password is registered, press Enter. The screen reactivates and allows you to continue working.

If you are using the built-in screen, make sure the display priority is not set for an external monitor. To do this, hold the Fn key and press F5 twice. A window with display choices pops up. Hold the Fn key and press F5 twice again to advance through the display options.

If you are using an external monitor:

- Check that the monitor is turned on.
- Check that the monitor's power cable is firmly plugged into a working power outlet.
- Check that the cable connecting the external monitor to the computer is firmly attached.
- Try adjusting the contrast and brightness controls on the external monitor.
- Press Fn and F5 simultaneously to make sure the display priority is not set for the built-in screen.

The screen does not look right.

You can change the display settings by clicking a blank area of the desktop with the secondary control button, then clicking Properties. This opens the Display Properties dialog box. The Appearance tab of this dialog box allows you to choose the colors for the screen. The Settings tab allows you to choose the screen resolution.

The built-in screen flickers.

Some flickering is a normal result of the way the screen produces colors. To reduce the amount of flickering, try using fewer colors.

To change the number of colors displayed:

1. Point at the desktop and click with the secondary button.

2 Click **Properties**, and then the **Settings** tab.

3 Change the Colors option and click **OK**.

For more information, see Windows® Help.

A message tells you that there is a problem with your display settings and that the adapter type is incorrect or the current settings do not work with your hardware.

Reduce the size of the color palette to one that is supported by the computer's internal display.

To change the display properties:

1 Point at the desktop and click with the secondary button.

The Display Properties window appears.

2 Click **Properties**, then click the **Settings** tab.

3 Adjust the screen resolution and/or color quality.

4 Click **OK**.

The display mode is set to Simultaneous and the external display device does not work.

Make sure the external monitor is capable of displaying at resolutions of 800 x 600 or higher. Devices that do not support this resolution will only work in Internal/External mode.

Disk drive problems

Problems with the hard disk or with a diskette drive usually show up as an inability to access the disk or as sector errors. Sometimes a disk problem may cause one or more files to appear to have garbage in them. Typical disk problems are:

You are having trouble accessing a disk, or one or more files appear to be missing.

Make sure you are identifying the drive by its correct name (A: or C:).

Error-checking

Run Error-checking, which analyzes the directories, files and File Allocation Table (FAT) on the disk and repairs any damage it finds:

To run Error-checking:

1. Click **Start**, then click **My Computer**.
2. Right-click the drive you want to check and select **Properties** from the menu.

   The drive's properties box appears.
3. Click the **Tools** tab.
4. Click the **Check now** button.

   The Check Disk All Apps box appears.
5. You can choose one or both options:
   - Automatically fix file system errors
   - Scan for and attempt recovery of bad sectors
6. Click **Start**.

   Error-checking runs the test.

Your hard disk seems very slow.

If you have been using your computer for some time, your files may have become fragmented. Run Disk Defragmenter. To do this, click **Start**, then click **All Programs**, point to **Accessories** and **System Tools**, and click **Disk Defragmenter**.

Your data files are damaged or corrupted.

Refer to your software documentation for file recovery procedures. Many software packages automatically create backup files.

You may also be able to recover lost data using utility software, which is available from your dealer.

Some programs run correctly but others do not.

This is probably a configuration problem. If a program does not run properly, refer to its documentation and check that the hardware configuration meets its needs.

A diskette will not go into the external diskette drive.

You may already have a diskette in the drive. Make sure the drive is empty.

You may be inserting the diskette incorrectly. Hold the diskette with the hub side facing down, and insert it so that the metal head window cover goes into the drive first.

The metal cover or a loose label may be obstructing the path into the drive. Carefully inspect the diskette. If the metal cover is loose, replace the diskette. If the label is loose, replace the label and try inserting the diskette again.

The computer displays the Non-system disk or disk error message.

If you are starting the computer from a diskette, the diskette in the drive does not have the files necessary to start the computer. Replace it with a bootable diskette.

The drive cannot read a diskette.

Try another diskette. If you can access the second diskette, the first diskette (not the drive) is probably causing the problem. Run Error-checking on the faulty diskette (for instructions, see "Disk drive problems" on page 199).

DVD-ROM or Multifunction drive problems

You cannot access a disc in the drive.

Make sure the drive tray has closed properly. Press gently until it clicks into place.

Open the drive tray and remove the disc. Make sure the drive tray is clean. Any dirt or foreign object can interfere with the laser beam.

Examine the disc to see whether it is dirty. If necessary, wipe it with a clean damp cloth dipped in water or a neutral cleaner.

Replace the disc in the tray. Make sure it is lying flat, label side uppermost. Press the disc down until it locks on the spindle. Close the drive tray carefully, making sure it has shut completely.

You press the disc eject button, but the drive tray does not slide out.

Make sure the computer is connected to a power source and turned on. The DVD-ROM or Multifunction drive eject mechanism requires power to operate.

To remove a disc without turning on the computer, use a narrow object, such as a straightened paper clip, to press the manual eject button. This button is in the small hole next to the disc eject button on the right side of the computer.

Some discs run correctly, but others do not.

If the problem is with an application CD-ROM, refer to the software's documentation and check that the hardware configuration meets the program's needs.

The color of the materials used to make the disc can affect its reliability. Silver-colored CD-ROMs are the most reliable, followed by gold-colored CD-ROM. Green-colored CD-ROMs are the least reliable.

Sound system problems

You do not hear any sound from the computer.

Adjust the volume control.

If you are using external headphones or speakers, check that they are securely connected to your computer.

The computer emits a loud, high-pitched noise.

This is feedback between the microphone and the speakers. It occurs in any sound system when input from a microphone is fed to the speakers and the speaker volume is too loud. Adjust the volume control.

Changing the settings for the Record Monitor feature in the Recording Control Utility (default Off), or the Mute feature in the Mixer Utility (default Enabled), may cause feedback. Revert to the default settings.

PC Card problems

PC Cards (PCMCIA-compatible) include many types of devices, such as a removable hard disk, additional memory, or a pager.

Most PC Card problems occur during installation and setup of new cards. If you're having trouble getting one or more of these devices to work together, several sections in this chapter may apply.

Resource conflicts can cause problems when using PC Cards. See "Using PC Cards" on page 103 for more information.

Card Information Structure

When you insert a PC Card into a slot, the computer attempts to determine the type of card and the resources it requires by reading its Card Information Structure (CIS). Sometimes the CIS contains enough information for you to use the card immediately.

Other cards must be set up before you can use them. Use the Windows® XP PC Card (PCMCIA) Wizard to set up the card. Refer to your Microsoft® documentation for more information, or refer to the documentation that came with the PC Card.

Some card manufacturers use special software called *enablers* to support their cards. Enablers result in nonstandard configurations that can cause problems when installing the PC Card.

If your system does not have built-in drivers for your PC Card and the card did not come with an operating system driver, it may not work under the operating system. Contact the manufacturer of the PC Card for information about using the card under the operating system.

PC Card checklist

- Make sure the card is inserted properly into the slot.

  See "Using PC Cards" on page 103 for information about how to insert PC Cards.

- Make sure all cables are securely connected.
- Occasionally a defective PC Card slips through quality control. If another PCMCIA-equipped computer is available, try the card in that machine. If the card malfunctions again, it may be defective.

Resolving PC Card problems

Here are some common problems and their solutions:

The slots appear to be dead. PC Cards that used to work no longer work.

Check the PC Card status:

1. Click **Start**.
2. Click **My Computer** icon with the secondary button, then click **Properties**.

The System Properties dialog box appears.

3 Click the **Hardware** tab.

4 Click the **Device Manager** button.

5 Double-click the **PCMCIA adapter**.

6 Double-click the appropriate PC Card.

The operating system displays your PC Card's Properties dialog box, which contains information about your PC Card configuration and status.

The computer stops working (hangs) when you insert a PC Card.

The problem may be caused by an I/O (input/output) conflict between the PCMCIA socket and another device in the system. Use Device Manager to make sure each device has its own I/O base address. See "Fixing a problem with Device Manager" on page 193 for more information.

Since all PC Cards share the same socket, each card is not required to have its own address.

Hot swapping (removing one PC Card and inserting another without turning the computer off) fails.

Follow this procedure before you remove a PC Card:

1 Double-click the **Remove Hardware Safely** icon in the system tray.

2 Click **Safely remove *xxxx***, where *xxxx* is the identifier for your PC Card.

The operating system displays a message that you may safely remove the card.

3 Remove the card from the slot.

The system does not recognize your PC Card.

Refer to the PC Card documentation.

Removing a malfunctioning card and reinstalling it can correct many problems.

A PC Card error occurs.

Reinsert the card to make sure it is properly connected.

If the card is attached to an external device, check that the connection is secure.

Refer to the card's documentation, which should contain a troubleshooting section.

Printer problems

This section lists some of the most common printer problems:

The printer will not print.

Check that the printer is connected to a working power outlet, turned on and ready (on line).

Check that the printer has plenty of paper. Some printers will not start printing when there are just two or three sheets of paper left in the tray.

Make sure the printer cable is firmly attached to the computer and the printer.

Run the printer's self-test to check for any problem with the printer itself.

Make sure you installed the proper printer drivers, as shown in "Setting up your printer" on page 156.

You may have connected the printer while the computer is on. Disable Stand By mode, turn off the computer, and turn off the printer. Turn the printer back on, make sure it is on line, then turn the computer back on.

Try printing another file. For example, you could create and attempt to print a short test file using Notepad. If a Notepad file prints correctly, the problem may be in your original file.

If you cannot resolve the problem, contact the printer's manufacturer.

The printer will not print what you see on the screen.

Many programs display information on the screen differently from the way they print it. See if your program has a print preview mode. This mode lets you see your work exactly as it will print. Contact the software manufacturer for more information.

Modem problems

This section lists common modem problems:

The modem will not receive or transmit properly.

Make sure the cable from the modem to the telephone line is firmly connected to the computer's modem port and the telephone line jack.

Check the port settings to make sure the hardware and software are referring to the same COM port. See "Determining the COM port" on page 135.

Check the communications parameters (baud rate, parity, data length and stop bits) specified in the communications program. It should be set up to transmit at 300, 1200, 2400, 4800, 9600, 14400, 28800, 33600 bps (bits per second) or higher. Refer to the program's documentation and the modem manual for information on how to change these settings.

The modem is on, set up properly and still will not transmit or receive data.

Make sure the line has a dial tone. Connect a telephone handset to the line to check this.

The other system may be busy or off line. Try making a test transmission to someone else.

Develop good computing habits

Make sure you are prepared.

Save your work frequently.

You can never predict when your computer will lock, forcing you to close a program and lose unsaved changes. Many software programs build in an automatic backup, but you should not rely solely on this feature. Save your work! See "Computing tips" on page 85 for instructions.

On a regular basis, back up the information stored on your hard disk.

Here are some ways you can do this:

- Copy files to diskette, following the steps in "Saving your work" on page 95.
- Connect a tape drive to the system and use specialized software to copy everything on the hard disk to a tape.

Some people use a combination of these methods, backing up all files to tape weekly and copying critical files to diskette on a daily basis.

If you have installed your own programs, you should back up these programs as well as your data files. If something goes wrong that requires you to reformat your hard disk and start again, reloading all your programs and data files from a backup source will save time.

Read the user's guides.

It's very difficult to provide a fail-safe set of steps you can follow every time you experience a problem with the computer. Your

ability to solve problems will improve as you learn about how the computer and its software work together.

Get familiar with all the user's guides provided with your computer, as well as the manuals that come with the programs and devices you purchase.

Your local computer store or book store sells a variety of self-help books you can use to supplement the information in the manuals.

If you need further assistance

If you have followed the recommendations in this chapter and are still having problems, you may need additional technical assistance. This section contains the steps to take to ask for help.

Before you call

Since some problems may be related to the operating system or the program you are using, it is important to investigate other sources of assistance first.

Try the following before contacting Toshiba:

- Review the troubleshooting information in your operating system documentation.
- If the problem occurs while you are running a program, consult the program's documentation for troubleshooting suggestions. Contact the software company's technical support group for their assistance.
- Consult the dealer from whom you purchased your computer and/or program. Your dealer is your best source for current information.

For the number of a Toshiba dealer near you in the United States, call: (800) 457-7777.

Contacting Toshiba

If you still need help and suspect that the problem is hardware-related, Toshiba offers a variety of resources to help you.

- Start with accessing Toshiba on the Internet using any Internet browser by typing pcsupport.toshiba.com

Toshiba voice contact

Before calling Toshiba, make sure you have:

- Your computer's serial number.
- The computer and any optional devices related to the problem.
- Backup copies of your operating system and all other preloaded software on diskettes or CD-ROM.
- Name and version of the program involved in the problem along with its installation diskettes or CD-ROM.
- Information about what you were doing when the problem occurred.
- Exact error messages and when they occurred.

For technical support, call the Toshiba InTouch® Center:

Within the United States at (800) 457-7777

Outside the United States at (949) 859-4273

Other Toshiba Internet Web sites

toshiba.com	Worldwide Toshiba corporate site
computers.toshiba.com	Marketing and product information in the USA
www.toshiba.ca	Canada
www.toshiba-Europe.com	Europe
www.toshiba.co.jp/index.htm	Japan
http://servicio.toshiba.com	Mexico and all of Latin America

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France

Germany
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109 Syngrou Avenue
176 71 Kalithea
Athens
Greece

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Hungary

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Toshiba Information Systems
(U.K) Ltd.
Toshiba Court
Weybridge Business Park
Addlestone Road
Weybridge KT15 2UL
United Kingdom

Italy
Progetto Elettronica 92 s.r.l.
Viale Certosa 138,
20156 Milano
Italy

Japan
Toshiba Corporation, PCO-IO
1-1, Shibaura 1-Chome
Minato-Ku, Tokyo, 105-8001
Japan

Latin America and Caribbean
Toshiba America Information
Systems, Inc.
9740 Irvine Boulevard
Irvine, California 92618
United States

800-457-7777 (within the US)

949-859-4276 (outside the US - this
call may incur long distance charges)

Luxembourg
Toshiba Information Systems Benelux
B.V.
Rivium Boulevard 41
2909 LK, Capelle a/d IJssel
The Netherlands

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Toshiba de México S.A. de C.V.
Sierra Candela No.111, 6to. Piso
Col. Lomas de Chapultepec.
CP 11000 Mexico, DF.

Tel: 5249-6500

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Kalbakken
0901 OSLO 9
Norway

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Fujitsu (PNG) Pty. Ltd.
P.O. Box 4952 Boroko
NCD, Papua
New Guinea

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01-059 Warszawa
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Toshiba Singapore Pte. Ltd.
438B Alexandra Rd. # 06-01
Alexandra Technopark
Singapore 119968

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61230 Domzale
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171 27 Solna
Sweden

Switzerland
Ozalid AG
Herostrasse 7
8048 Zürich
Switzerland

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Weybridge Business Park
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Weybridge KT15 2UL
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United States
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United States

The Rest of Europe
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Germany

Appendix A

Hot Keys

Hot keys are keys that, when pressed in combination with the Fn key, turn system functions on and off. Hot keys have a legend on or above the key indicating the option or feature the key controls.

Volume Mute

Fn +

This hot key enables/disables volume mute on your computer.

When volume mute is enabled, no sound will come from the speakers or headphones.

Instant password security

Fn +

This hot key blanks the display.

Without a password

The Fn + F1 key combination turns off the display and activates instant security. Using the mouse or any key will make the display reappear. For information on setting a power-on password, see "Setting user passwords" on page 180.

With a password

The Fn + F1 key combination turns off the display and activates instant security. Using the mouse or any key will make the screen saver password dialog box appear, and you can then type in either a user or supervisor password.

For the Windows® XP operating system, you type the user or supervisor password into the Windows® security screen dialog box.

To activate the password feature:

1. Click **Start**, **Control Panel**, then **Appearance and Themes.**
2. Click **the Display icon**.
3. Select the **Screen Saver** tab.
4. Click the **On resume, password protected** check box.
5. Click **OK**.

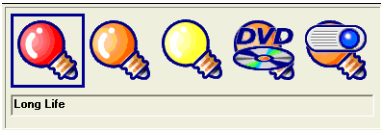
Power usage mode

Fn +

This hot key displays the power usage pop-up window and cycles through the battery save modes.

The power usage modes in the operating system under battery power are:

Long Life, Normal, and High Power; DVD Playback, Presentation and Super Long Life



Sample power usage modes

The power usage mode in the Windows® operating system under AC power is Full Power only.

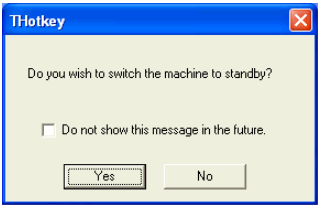
The properties of each mode are set in the Toshiba Power Management utility. For more information, see "Mobile Computing" on page 117.

Stand By mode

Fn +

This hot key puts the computer into Stand By mode.

A message box is displayed by default to confirm that the computer is going into Stand By mode. This message box can be set so it doesn't display.



Sample Stand By confirmation box

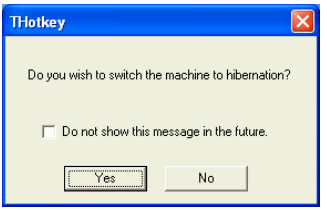
For more information about Stand By mode, please see "Using Standby" on page 113.

Hibernation mode

Fn +

This hot key puts the computer into Hibernation mode.

If Hibernation mode is enabled (the default) a message box is displayed by default to confirm the computer is going into Hibernation mode. The message box can be set so it doesn't display.



Sample Hibernation confirmation box

If Hibernation mode is disabled, this hot key will not respond. For more information on Hibernation mode, see "Enabling Hibernation" on page 180.

Display modes

Fn +

This hot key cycles through the power-on display options.

The display modes are:

- Built-in display panel only
- Built-in display panel and external monitor simultaneously
- External monitor only
- Built-in display panel and external video device simultaneously
- External video device only

Sample display options window

In order to use a simultaneous mode, you must set the resolution of the internal display panel to match the resolution of the external display device.

Display brightness

Fn +

This hot key decreases the screen brightness.

Fn +

This hot key increases the screen brightness.

Enabling a wireless device

Fn +

This hot key enables/disables the optional wireless devices installed in your computer (for systems with Wi-Fi™ only).

The wireless modes are:

Wi-Fi enabled—This enables the Wi-Fi module.

Wi-Fi disabled—This disables the Wi-Fi module.

Keyboard hot keys

Fn +

This hot key turns the cursor control overlay on and off.

Fn +

This hot key turns the numeric overlay on and off.

Fn +

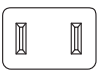
This hot key turns the scroll lock feature on and off.

Appendix B

Power Cable Connectors

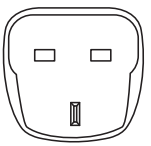
The computer features a universal power supply you can use worldwide. This appendix shows the shapes of the typical AC power cable connectors for various parts of the world.

USA and Canada



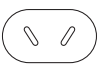
UL approved
CSA approved

United Kingdom



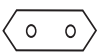
BS approved

Australia



AS approved

Europe



VDA approved
NEMKO approved

Glossary

TECHNICAL NOTE: Some features defined in this glossary may not be available on your computer.

Acronyms

These acronyms may appear in this user's guide.

AC	alternating current
BIOS	basic input/output system
bps	bits per second
CD	compact disc
CD-ROM	compact disc read-only memory
CD-RW	compact disc rewrite memory
CMOS	complementary metal-oxide semiconductor
COM1	communications port 1 (serial port)
COM2	communications port 2 (serial port)
CPU	central processing unit

DC	direct current
DMA	direct memory access
DIMM	dual inline memory module
DOS	disk operating system
DPI	dots per inch
DSTN	dual supertwist nematic
DVD	digital versatile (or video) disc
DVD-ROM	digital versatile (or video) disc read-only memory
ECP	enhanced capabilities port
EPROM	erasable programmable read-only memory
FAT	file allocation table
FCC	Federal Communications Commission
FIR	fast infrared
GB	gigabyte
HDD	hard disk drive
HTML	Hypertext Markup Language
IEEE	Institute of Electrical and Electronics Engineers
I/O	input/output
IRQ	interrupt request
ISP	Internet service provider
KB	kilobyte
LAN	local area network
LCD	liquid crystal display
LPT1	line printer port 1 (parallel port)
LSI	large-scale integration
MB	megabyte
MIDI	Musical Instrument Digital Interface
PC	personal computer
PCI	Peripheral Component Interconnect
PCMCIA	Personal Computer Memory Card International Association

RAM	random access memory
RFI	radio frequency interference
ROM	read-only memory
RTC	real-time clock
SCSI	small computer system interface
DDRAM	double data random access memory
SRAM	static random access memory
SVGA	super video graphics adapter
TFT	thin film transistor
USB	universal serial bus
URL	uniform resource locator
WAN	wide area network
www	World Wide Web

Terms

These terms may appear in this user's guide.

A

active-matrix display — A liquid crystal display (LCD) made from an array of liquid crystal cells using active-matrix technology. Also known as a "TFT display," in its simplest form there is one thin film transistor (TFT) for each cell. This type of display works well with notebook computers because of its shallow depth and high-quality color. Active-matrix displays are viewable from wider angles than most passive-matrix displays.

adapter — A device that provides a compatible connection between two units. For example, the computer's internal display adapter receives information from the software and translates it into images on the screen. An adapter can take a number of forms, from a microprocessor to a simple connector. An intelligent adapter (one that is capable of doing some processing) may also be called a controller.

alternating current (AC) — The type of power usually supplied to residential and commercial wall outlets. AC reverses its direction at regular intervals. Compare *direct current (DC).*

application — A computer program that you use to perform tasks of a specific type. Applications include word processors, spreadsheets, and database management systems. See also *program*.

B

backup — A copy of a file, usually on a removable disk, kept in case the original file is lost or damaged.

basic input/output system (BIOS) — See *BIOS.*

baud rate — The speed at which a communication device, such as a printer or modem, transmits information. Baud rate is the number of signal changes per second (not necessarily the same as bits per second). See also *bits per second*.

BIOS (basic input/output system) — Basic instructions, stored in read-only memory (ROM), containing the information the computer needs in order to check hardware and load the operating system when you start up the computer.

bit: — Short for "binary digit." A bit is the smallest unit of information used by a computer. A group of eight bits is a byte. See also *byte*.

bits per second (bps) — A way of measuring the speed at which information is passed between two devices. The basic measure used in modem communications, bps is similar, but not identical, to the baud rate. See also *baud rate*.

boot — To start the computer. The term "boot" originates from bootstrap program (as in "pulling itself up by its bootstraps"), a program that loads and initializes the operating system. See also *reboot.*

boot disk — See *system disk.*

boot priority (startup sequence) — The order in which the computer accesses its disk drives to locate the startup files. Under the default startup sequence, the computer looks for the startup files in the diskette drive before checking the hard disk.

bus — An electrical circuit that connects the central processing unit (CPU) with other parts of the computer, such as the video adapter, disk drives, and ports. It is the pathway through which data flows from one device to another. See also *bus speed*, *frontside bus*.

bus speed — The speed at which the central processing unit (CPU) communicates with the other parts of the computer.

byte — A sequence of eight bits. A byte is the smallest addressable unit of data. See also *bit, gigabyte, kilobyte*, *megabyte*.

C

cache — A section of very fast memory in which frequently used information is duplicated for quick access. Accessing data from cache is faster than accessing it from the computer's main memory. See also *CPU cache, L1 cache, L2 cache.*

CD — An individual compact disc. See also *CD-ROM.*

CD-ROM (compact disc read-only memory) — A form of high-capacity storage that uses laser optics instead of magnetic means for reading data. See also *CD*. Compare *DVD-ROM.*

central processing unit (CPU) — The chip that functions as the "brain" of the computer. It takes information from outside sources, such as memory or keyboard input, processes the information, and sends the results to another device that uses the information.

character — Any letter, number, or symbol you can use on the computer. Some characters are non-printing characters, such as a paragraph break in a word-processing program. A character occupies one byte of computer storage.

chip — A small piece of silicon containing computer logic and circuits for processing, memory, input/output, and/or control functions. Chips are mounted on printed circuit boards.

click — To press and release the AccuPoint control button or mouse button without moving the AccuPoint or mouse. In Windows®, this refers to the left mouse button or primary AccuPoint control button, unless otherwise stated. See also *double-click*.

color palette — A set of specified colors that establishes the colors that can be displayed on the screen at a particular time.

compatibility — The extent to which computers, programs, or devices can work together harmoniously, using the same commands, formats, or language as another.

configuration — (1) The collection of components that make up a single computer system. (2) How parts of the system are set up (that is, configured).

controller — A device that controls the transfer of data from a computer to a peripheral device and vice versa. For example, disk drives, monitors, keyboards, and printers all require controllers.

CPU — See *central processing unit (CPU).*

CPU cache — A section of very fast memory residing between the CPU and the computer's main memory that temporarily stores data and instructions the CPU will need to execute commands and programs. See also *cache, L1 cache, L2 cache.*

cursor — A symbol that indicates the current position on the screen. The shape of the cursor varies, depending on the program you're using and what you're doing.

D

default — The setting selected by a program when the user does not specify an alternative setting.

device — A component attached to the computer. Devices may be external (outside the computer's case) or internal (inside the computer's case). Printers, disk drives, and modems are examples of devices.

device driver — A program (called a "driver") that permits a computer to communicate with a device.

dialog box — An on-screen window displayed by the operating system or a program giving a direction or requesting input from the user.

direct current (DC) — The type of power usually supplied by batteries. DC flows in one direction. Compare *alternating current (AC).*

direct memory access (DMA) — A dedicated channel, bypassing the CPU, that enables direct data transfer between memory and a device.

directory — See *folder.*

disable — To turn a computer option off. See also *enable*.

disc — A round, flat piece of metal, designed to be read from and written to by optical (laser) technology, and used in the production of optical discs, such as CDs and DVDs. Compare *disk*.

disk — A round, flat piece of material that can be magnetically influenced to hold information in digital form, and used in the production of magnetic disks, such as diskettes and hard disks. Compare *disc*. See also *diskette, hard disk*.

disk drive — The device that reads and writes information and programs on a diskette or hard disk. It rotates the disk at high speed past one or more read/write heads.

diskette — A thin, flexible disk in a protective jacket that stores magnetically encoded data. Diskettes can be removed from the computer and come in two sizes: 5.25-inch and 3.5-inch. Your computer uses 3.5-inch diskettes. See also *double-density diskette, high-density diskette*.

document — Any file created with an application and, if saved to disk, given a name by which it can be retrieved. See also *file*.

double-click — To press the AccuPoint control button or mouse button rapidly twice without moving the AccuPoint or mouse. In the Windows® operating system, this refers to the primary AccuPoint control button or left mouse button, unless otherwise stated.

double-density diskette — A 3.5-inch diskette that can hold up to 720 KB of information (half the capacity of a high-density diskette). See also *diskette, high-density diskette*.

download — (1) In communications, to receive a file from another computer through a modem or network. (2) To send font data from the computer to a printer. See also *upload*.

drag — To hold down the AccuPoint control button or mouse button while moving the cursor to drag a selected object. In the Windows® operating system, this refers to the primary AccuPoint control button or left mouse button, unless otherwise stated.

driver — See *device driver*.

DVD — An individual digital versatile (or video) disc. See also *DVD-ROM*.

DVD-ROM (digital versatile [or video] disc read-only memory) — A very high-capacity storage medium that uses laser optics for reading data. Each DVD-ROM can hold as much data as several CD-ROMs. Compare *CD-ROM*.

E

emulation — A technique in which a device or program imitates another device or program.

enable — To turn on a computer option. See also *disable*.

executable file — A computer program that is ready to run. Application programs and batch files are examples of executable files. Names of executable files usually end with a .bat or .exe extension.

extension — See *file extension*.

external device — See *device.*

F

file — A collection of related information, saved on disk with a unique name. A file may be a program, information used by a program, or a document. See also *document.*

file allocation table (FAT) — The section of a disk that keeps track of the location of files stored on the disk.

file name — A set of characters that uniquely identifies a file within a particular folder. It consists of two parts: the actual name and the file name extension. See also *file extension*.

file extension — The three characters following the period (pronounced "dot") at the end of a file name. The extension indicates the type of file. Examples are .exe for program files and .hlp for help files. See also *file name.*

folder — Also called directory. A container for organizing files saved to a disk. A folder is symbolized on screen by a graphical image (icon) of a file folder. A folder can contain files and other folders.

format — (verb) To prepare a blank disk for use with the computer's operating system. Formatting creates a structure on the disk so the operating system can write information to the disk or read information from it.

frontside bus — The primary pathway (bus) between the CPU and the computer's main memory. Also called "system bus." See also *bus.*

function keys — The keys labeled F1 through F12, typically located on the keyboard. Their function is determined by the operating system and/or individual programs.

G

gigabyte (GB) — A unit of data equal to 1,073,741,824 bytes (1024 x 1024 x 1024 bytes). See also *byte.*

ground — A conductor to which all components of an electric circuit are connected. It has a potential of zero (0) volts, is connected to the earth, and is the point of reference for voltages in the circuit.

H

hard disk — A storage device composed of a rigid platter or platters that can be magnetically coded with data. Hard disks hold much more information than diskettes and are used for long-term storage of programs and data. The primary (or only) hard disk in a computer is usually fixed, but some computers have secondary hard disks that are removable. By default, the hard disk is referred to as drive C.

hardware — The physical components of a computer system. Compare *software.*

Hibernation — A feature of many Toshiba notebook computers that saves to the hard disk the current state of your work, including all open files and programs, when you turn the computer off. When you turn on the computer again, your work is returned to the same state it was when the computer was turned off. See also *Standby, Suspend.*

high-density diskette — A 3.5-inch diskette that holds 1.44 MB of data. See also *diskette.*

hot key — (1) A feature in which certain keys in combination with the Fn key can set system options or control system parameters, such as the battery save mode. (2) A key or combination of keys that activates a memory resident program.

hot swapping — The ability to add or remove devices from a computer while the computer is running and have the operating system automatically recognize the change.

I

icon — A small image displayed on the screen that represents a function, file, or program.

interlaced — A method of refreshing a computer screen, in which only every other line of pixels is refreshed. Interlaced monitors take two passes to create a complete screen image. Compare *non-interlaced.*

internal device — See *device.*

Internet — The decentralized, world-wide network of computers that provides electronic mail, the World Wide Web, and other services. See also *World Wide Web.*

K

keyboard shortcut — A key or combination of keys that you use to perform a task instead of using a pointing device such as the AccuPoint.

kilobyte (KB) — A unit of data equal to 1024 bytes. See also *byte*.

L

L1 (level one) cache — Memory cache built into the processor to help improve processing speed. See also *cache, CPU cache, L2 cache.*

L2 (level two) cache — Memory cache installed on the motherboard to help improve processing speed. It is slower than L1 cache and faster than main memory. See also *cache, CPU cache, L1 cache.*

LAN (local area network) — A group of computers or other devices dispersed over a relatively limited area and connected by a communications link that enables any device to interact with any other on the network.

liquid crystal display (LCD) — A type of display that uses a liquid substance between two transparent electrode panels. When an electric current passes through the electrodes, the molecules in the liquid form a crystalline pattern that polarizes the light passing through it. A filter over the electrodes permits only non-polarized light to pass to the surface of the display, creating light and dark pixels.

load — To move information from a storage device (such as a hard disk) into memory for processing.

local area network — See *LAN*.

logical drive — A section of a disk that is recognized by the operating system as a separate disk drive. A system's logical drives may differ from its physical drives. For example, a single hard disk drive may be partitioned into two or more logical drives.

M

megabyte (MB) — A unit of data equal to 1,048,576 bytes (1024 x 1024 bytes). See also *bytes*.

memory — Typically refers to the computer's main memory, where programs are run and data is temporarily stored and processed. Memory can be volatile and hold data temporarily, such as RAM, or it can be nonvolatile and hold data permanently, such as ROM. A computer's main memory is RAM. See *RAM*, *ROM*.

microprocessor — See *central processing unit (CPU)*.

MIDI (Musical Instrument Digital Interface) — A standard for connecting musical instruments, synthesizers, and computers. The MIDI standard provides a way of translating music into a form computers can use, and vice versa.

modem — Short for "modulator/demodulator." A device that converts information from digital to analog and back to digital, enabling information to pass back and forth between digital computers and analog telephone lines.

motherboard — The main circuit board in the computer. It contains the processor, memory, and other primary components.

MS-DOS® prompt — See *system prompt*.

multimedia — A combination of two or more media, such as sound, animation, and video in a computer program or presentation.

Musical Instrument Digital Interface — See MIDI.

N

network — A collection of computers and associated devices that are connected by communications facilities. A network allows you to share data and peripheral devices, such as printers, with other users and to exchange electronic mail.

non-interlaced — A method of refreshing a computer screen, in which each pixel of every line is refreshed as the electron beam scans across and down the screen. Compare *interlaced.*

non-system disk — A disk for storing programs and data that cannot be used to start the computer. Compare *system disk.*

O

online — Available through the computer. Online may refer to information being read from your own computer's hard disk, such as online documentation or online help, or to information coming from another company on a company network or the Internet.

operating system — A set of programs that controls how the computer works. Examples of operating systems are Windows® 98 Second Edition and Windows® XP Professional.

P

palette — See *color palette.*

parallel — Processes that occur simultaneously. In communications, it means the transmission of more than one bit of information at a time. On your computer, the parallel port provides a parallel communications interface between the computer and an appropriate device. Most modern printers are parallel. Compare *serial.*

password — A unique string of characters entered by a user to verify his or her identity to the computer or the network.

PC Card — A credit-card-sized expansion card designed to increase the capabilities of notebook computers. PC Cards provide functions such as modem, fax/modem, hard disk drive, network adapter, sound card, or SCSI adapter.

peripheral — Any device, such as a printer or joystick, that is attached to the computer and controlled by the computer's CPU.

pixel — Short for "picture element." The smallest dot that can be produced on a screen or printer.

Plug and Play — Generally, refers to the computer's ability to automatically configure itself to work with peripheral devices. When capitalized, refers to a standard that, when followed by a device manufacturer, allows a PC to configure itself automatically to work with the device.

pointing device — Any device, such as the AccuPoint or a mouse, that enables you to move the cursor on the screen.

port — A socket on the computer where you plug in a cable for connection to a network or a peripheral device.

processor — See *central processing unit (CPU)*.

program — A set of instructions that can be executed by a computer. The general classes of programs (also called software) are operating system, application, and utility. See also *operating system, application, utility.*

properties — The attributes of an object or device. For example, the properties of a file include the file's type, size, and creation date.

R

RAM (random access memory) — Volatile memory that can be written to as well as read. By volatile, we mean that information in RAM is lost when you turn off your computer. This type of memory is used for your computer's main memory. See also *memory.* Compare *ROM.*

random access memory — See *RAM.*

read-only memory — See *ROM.*

reboot — See *boot*, *restart*.

removable disk — A disk that can be removed from a disk drive. A diskette is one example of a removable disk.

resolution — A measure of the sharpness of the images that can be produced by a printer or displayed on a screen. For a printer, resolution is expressed in dots per inch (dpi). For a screen, it is expressed as the number of pixels available horizontally and vertically.

restart — Synonymous with reboot. To reset the computer by reloading the operating system without turning the computer off. See also *boot*.

RJ11 — A modular connector used on most U.S. telephone systems and direct-connect modems. The RJ11 connector is a 6-wire connector.

ROM (read-only memory) — Non-volatile memory that can be read but not written to. By non-volatile, we mean that information in ROM remains whether or not the computer is receiving power. This type of memory is used to store your computer's BIOS, which is essential instructions the computer reads when you start it up. See also *BIOS, memory.* Compare *RAM.*

S

select — To highlight or otherwise specify text, data, or graphics with the intent to perform some operation on it.

serial — Processes that occur one at a time. In communications, it means the transmission of one bit at a time sequentially over a single channel. On your computer, the serial port provides a serial interface between the computer and an appropriate device. Compare *parallel.*

shortcut — See *keyboard shortcut*.

software — See *program.* Compare *hardware.*

Standby — A feature of some Windows® operating systems that allows you to turn off the computer without exiting your open applications and to continue from where you left off when you turn the computer on again.

Suspend — A feature of some Windows® operating systems that allows you to turn off the computer without exiting your open applications and to continue from where you left off when you turn the computer on again.

system disk — A diskette that contains the operating system files needed to start the computer. Any diskette can be formatted as a system disk. A system disk is also called a "bootable disk" or a "startup disk." Compare *non-system disk.*

system prompt — The symbol (in MS-DOS®, generally a drive letter followed by a "greater than" sign) indicating where users are to enter commands.

T

TFT display — See *active-matrix display.*

U

universal serial bus (USB) — A serial bus that supports a data transfer rate of up to 12 Mbps (12 mega bits per second). USB can connect up to 127 peripheral devices through a single all-purpose USB port. USB allows hot swapping of peripherals. See also *bus, hot swapping, serial.*

upload — To send a file to another computer through a modem or network. See also *download.*

USB — See *universal serial bus (USB).*

utility — A computer program designed to perform a narrowly focused operation or solve a specific problem. Utilities are often related to computer system management.

W

Web — See *World Wide Web.*

Wi-Fi — A trademarked term by the Wireless Capability Ethernet Alliance which stands for Wireless Fidelity. Wi-Fi is another term for the IEEE 2.11b communication protocol to permit an Ethernet connection using wireless communication components.

World Wide Web (www) — The worldwide network of Web sites linked together over the Internet. A user of the Web can jump from site to site regardless of the location of the computer hosting the site. See also *Internet.*

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